

JUN 21 1948

MOTOR AGE

MAY 1948

A CHILTON PUBLICATION



STEEL-VENT SETS THE PACE



IT'S A
WET RING
IT REALLY
CONTROLS OIL
AND IT
CAN'T CLOG

Steel-Vent is a "wet" ring. Its greater surface area helps give it greater oil-carrying capacity, and its exclusive construction lets it carry this extra oil right to the cylinder wall.

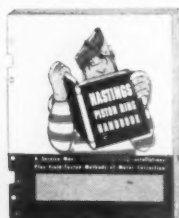
Steel-Vent keeps oil always under control with patented features that give it high unit pressure with lower total tension. More-than-ample drain-

age capacity handles the extra oil easily.

Steel-Vent can't clog. Its side-opening spacer operates against a moving segment with a breathing action that automatically cleanses itself of carbon and gum accumulations.

These are three big reasons why Steel-Vent means longer life in any job—rering or rebore.

HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN
HASTINGS LTD., TORONTO
U. S. PAT. 2,148,997



PISTON RING HANDBOOK

A new, 40-page serviceman's reference with field-tested suggestions to help turn out better work, easier and faster. Write for free copy or ask your jobber salesman.

TOUGH BUT OH SO GENTLE

HASTINGS
STEEL-VENT PISTON RINGS

TOUGH on Oil Pumping
GENTLE on Cylinder Walls

The THREE NECESSITIES



• . . . FOR LEAK-PROOF, PRESSURE-TIGHT UNIONS

FORM - A - GASKET No. 1 (a paste) sets fast but not too fast for use on large surfaces. It dries hard but does not become brittle. It's a swell product for making pressure-tight, leak-proof unions . . . even when the surfaces are warped.

FORM-A-GASKET No. 2 (a paste) sets slower than No. 1. It dries to a tough, pliable layer with plenty of "cushion." It resists high pressures, continual vibrations and disassembles very easily.

AVIATION FORM - A - GASKET No. 3 (a brushable, self - leveling liquid) sets into position and dries to a tacky paste. It will not run, even when heated to 400° F. . . . nor will it become hard or brittle down to 70° F. below. Especially useful on threaded pipe and rubber hose connections. Prevents corrosion and cylinder head seizure.

ALL TYPES OF FORM-A-GASKET PRESERVE ALL TYPES OF GASKETS!

PERMATEX COMPANY, INC., BROOKLYN 29, N. Y.



FLUSH

OFF THE DIRT WITH EVERY SQUIRT

...fully automatic; nothing to pump



Over one million installations now make it easier than ever to sell Trico's "Two Little Squirts" . . . to car owners . . . to taxicab and truck owners *by the fleet*.

And Trico is helping further by colorful and consistent advertising in the *Saturday Evening Post*, *Life*, *Collier's*, *Time*, *Country Gentleman* and other publications reaching tens of millions.

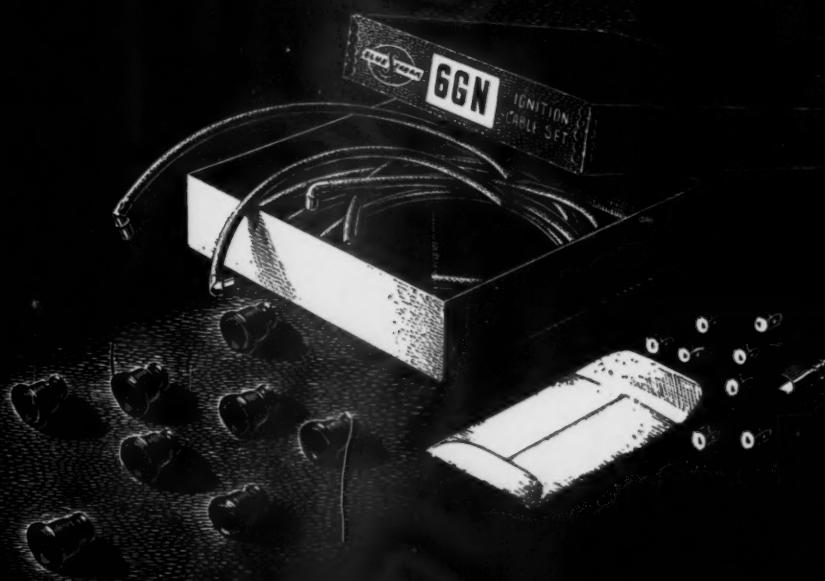
Now easier than ever to install, too, with a large volume of new car production being piped at the factory. The big season is just ahead. Order your stock NOW.

Trico Products Corporation, Buffalo 3, N. Y.



Windshield Washers

\$6²⁵ PLUS
INSTALLATION



Imagine insulation that's as much at home in ice-berg country as a polar bear and happy as a 'gator in steaming jungle heat, too. That's neoprene . . . and that's the insulation we use in Blue Streak ignition cable sets.

You're sure to please customers with Blue Streak

cable, because neoprene resists "corona", abrasion, gasoline, oil, age and heat — the usual trouble-markers.

So if you've never tried Blue Streak cable, make the switch soon. You'll please more customers and you'll earn more too. Isn't it worth a try?

better your business... buy Blue Streak

STANDARD MOTOR PRODUCTS, INC., LONG ISLAND CITY 1, NEW YORK

APRIL, 1948

When writing to advertisers please mention Motor Age

3

MOTOR AGE, Vol. LXVII, No. 5. Published monthly by Chilton Co., Chestnut & 56th Sts., Phila. 39, Pa. Entered as Second-Class Matter December 27, 1935, at the Post Office at Philadelphia, Pa.; Under the Act of Congress of March 3, 1879. In case of Non-Delivery Return Postage Guaranteed. Subscription price: United States, Mexico, United States Possessions, and all Latin-American countries, \$3.00 per year. Canadian and foreign, \$5.00 per year; single copies, 40 cents.



*"Here's some common sense
on spark plug profits"*



NO OTHER SPARK PLUG EQUALS

**“AMERICA’S FAVORITE
SPARK PLUG”**

IN REPLACEMENT SALES . . .

SO—stock and sell

CHAMPION

for steadier, more consistent profits

year after year !

CHAMPION SPARK PLUG COMPANY, TOLEDO 1, OHIO

*More
and More
they're asking
for...*

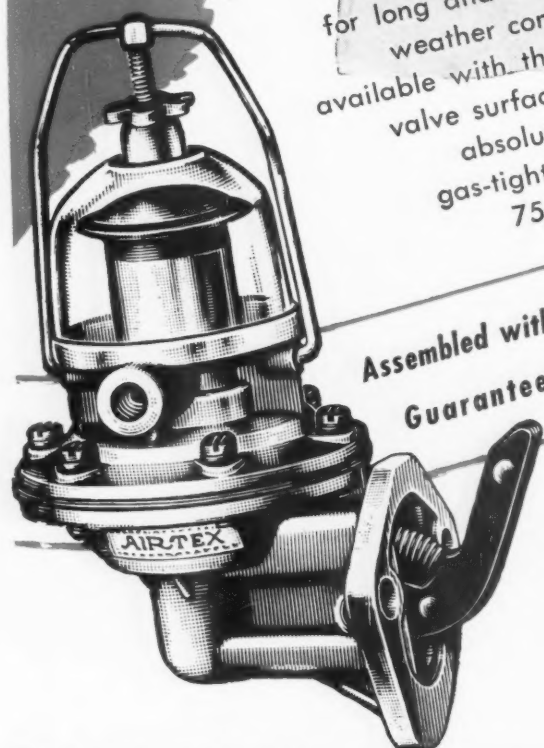
| NO. | NAME | WORK | CAR |
|-----|-----------|---------------------|---------------|
| 216 | JONES | INSTALL AIRTEX PUMP | CADILLAC |
| 217 | THOMAS | RING JOB | PLYMOUTH |
| 218 | KITTRIDGE | AIRTEX FILTER | 38 DODGE |
| 219 | KRAMER | NEW TIRES | 41 CHEVROLET |
| 220 | AUGUST | INSTALL AIRTEX PUMP | 39 FORD |
| 221 | SMITH | MOTOR TUNE | 41 OLDSMOBILE |

AIRTEX

Factory Tested

FUEL PUMPS

Precision-made Airtex Fuel Pumps can be depended upon for long and efficient service under the toughest driving and weather conditions. Airtex Pumps combine the finest materials available with the most advanced manufacturing methods — valve surfaces machined to within 2/1000ths of an inch . . . absolutely uniform, non-porous castings . . . patented, gas-tight diaphragms that will withstand over 75,000,000 flexings without a crack or puncture!



Assembled with AIRTEX DIAPHRAGMS
Guaranteed for 50,000 MILES

INSTANT ALL-WEATHER
STARTING-RETAIN FLEXI-
BILITY AT TEMPERATURES
AS LOW AS - 30° F.

AIRTEX AUTOMOTIVE DIVISION
Chefford Master Mfg. Co., Inc.
FAIRFIELD • ILLINOIS

YOUR PROFITS CLIMB
WITH THE AIRTEX LINE



For Extra Profits — recommend and sell Airtex Gasoline Filter-Dampers

Good Ignition Demands Good Points...



Make sure of good ignition performance by using Delco-Remy contact points when you *must* replace the points in a Delco-Remy distributor.

Delco-Remy contact points are made from the best materials obtainable—selected after rigid tests and analysis. They're designed and manufactured for long life and maximum satisfaction. Buy them in packaged sets—there's a right type for each Delco-Remy distributor.

**USE
DELCO-REMY
DISTRIBUTOR
CONTACT
POINTS
IN
DELCO-REMY
DISTRIBUTORS**

WARNING: To be sure of getting Delco-Remy contact points, buy them from recognized distributors.



Delco-Remy

DIVISION, GENERAL MOTORS CORPORATION
ANDERSON, INDIANA

DELCO-REMY—A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS



WHEREVER WHEELS TURN OR PROPELLERS SPIN

NEW! Chrome-plated Compression Ring



**CENTRIFUGALLY CAST
OF C-90 Metal**

Recommended for the TOP groove in commercial vehicles where the load is heavy and sustained . . . or in any vehicle operating under abrasive dust conditions. With this new Pedrick development, you can do truck and farm-tractor overhauls that last *two to four times as long*. This gives you a real advantage in promoting more engine repair business. See your Pedrick jobber, or write direct, for sizes available and prices.

WILKENING MANUFACTURING Co., Philadelphia 42, Pa. In Canada: Wilkening Manufacturing Co. (Canada) Ltd., Toronto.

GIVES YOU THESE IMPORTANT ADVANTAGES

2 to 4 Times the Life

Chrome has extremely high anti-friction and lubricant-retaining characteristics. It wears with extra slowness even when abrasive dust is present. Its use as a plating on the face of this special Pedrick top compression ring not only increases greatly the wearability of the ring, but also reduces *cylinder* wear and the wear of all the other rings in the installation. Efficient life is thus increased *two to four times*.

No Breakage

Pedrick's new C-90 alloy, centrifugally cast and specially heat-treated, has high tensile and impact strength. It is not subject to hydrogen-embrittlement from the chrome-plating process. Its strength and toughness eliminate breakage even under very heavy loading.

Positive Seal

The combination of the TS1 (Twist-Seal) design and the exclusive "Thermo-Caming" and "Heat-Shaping" processes, makes possible a tolerance of zero in the light gauge *without lapping*. Pedrick CHROME rings really seal the cylinder, stop blow-by, preserve full power.

Pedrick

"HEAT-SHAPED" PISTON RINGS

For 28 Years, Supplier of Piston Rings to
Leading Vehicle and Engine Manufacturers.

Grey-Rock

BALANCED BRAKE LININGS

Right Again
for '48!



BALANCED BRAKSETS. Packaged drilled, or plain for bonding, for all passenger cars.



BALANCED TRUCKSETS for light and medium trucks packaged drilled (and popular numbers plain for bonding).



BOLT-ON BLOCKS.
For Heavy-Duty Buses,
Trucks, and Trailers.



STANDARD SETS GREY-ROCK
quality Wyrbac linings.

Right for you.

Right for your customers.

Right because there are not just 1 or 2, but many different types of linings factory engineered and packaged in combinations to give quick, quiet, smooth, *Balanced* stops . . . and long wear.

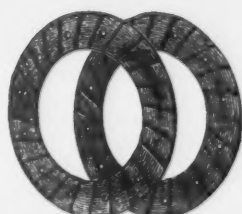
Right because they eliminate costly "come-backs."

Right because they're clearly marked for make and model on every box.

Right because they're known through big, colorful ads regularly in

POST • COLLIER'S • HOLIDAY

See your GREY-ROCK jobber for Balanced Brake Linings for cars, trucks, and buses . . . sets for Bonding . . . GREY-ROCK Brake Servicing information, based on National Safety Council standards.

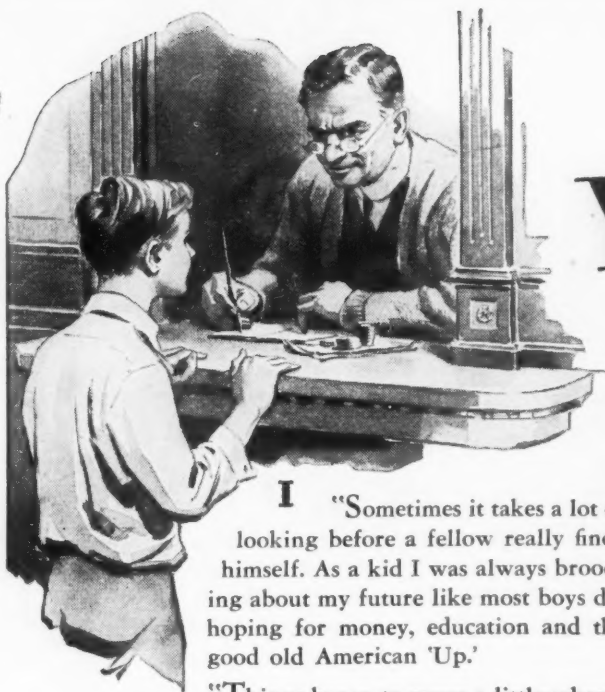


VEE-LOK, Molded and Semi-Metallic CLUTCH FACINGS. For trucks, buses and cars.

FAN
BELTS



RADIATOR
HOSE



Search and Find YOURSELF

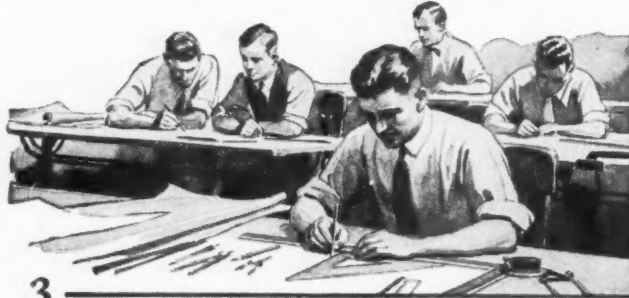
Reading time:
1 minute, 56 seconds

says George —

I "Sometimes it takes a lot of looking before a fellow really finds himself. As a kid I was always brooding about my future like most boys do, hoping for money, education and the good old American 'Up.'

"Things began to move a little when I got my first real money, \$200.00 for helping a farmer with his harvest. When I put it in the bank they told me it would grow big if I just left it alone.

"Out of high school I got a job in a factory making auto parts. Talk about work. My pay was \$65.00



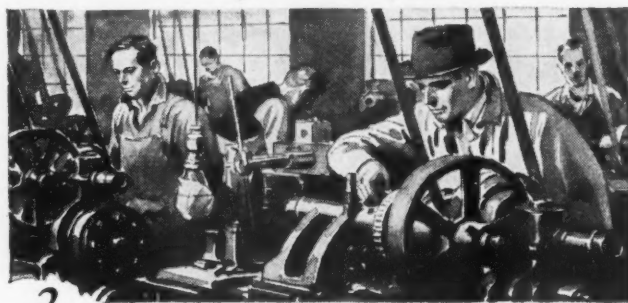
estate. I was a regular rolling stone, I suppose, but gathering a little 'moss' and experience as I went along.

"One night I sat up late trying to figure things out. When I finally asked myself the simple question, 'What do you really like best?' the answer popped right into my head. 'Automobiles' was the answer. I'm sure that's when I found myself.

"Now comes the payoff. It was a dozen years since I banked that first money. Now it came to my rescue almost twice as big as when I put it in.

"With my best friend for a partner we rented a lot, put up our own shack, hung up our own signs, and bought some used cars. Yes we sold 'em, and believe it or not a couple hundred more that first year.

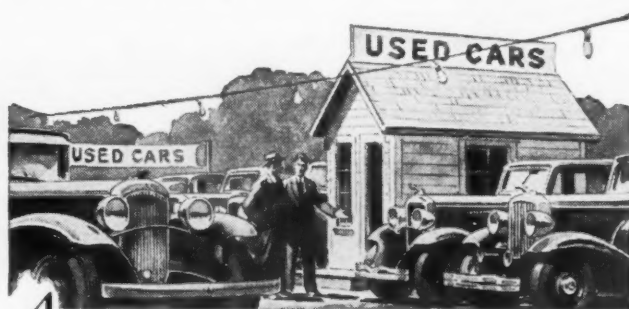
"After three years of hard work and good profits we screwed up our courage and applied for the Dodge-Plymouth dealership. After weeks of discussion with the Dodge officials we got the dealership right in our own home town.



a month for a six-day week, including holidays. I stayed two years, learned a lot about autos, saved some more money, put it in the bank, left it alone.

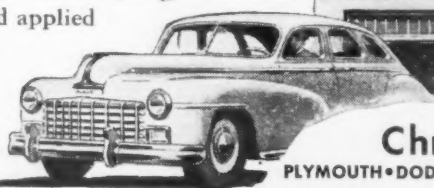
"When the first World War ended things were topsy-turvy, so I tried school again. When my savings began to dwindle I couldn't stand the strain so I quit, and started searching for myself all over again.

"I got a job making maps for an engineering outfit. I worked in a general store. I hired out as a farm hand. I tried selling automobiles and took a flier in real



"If there's any moral to this story I guess it's that it pays to save your money for a day of rain,—or opportunity. Beyond that, once a good guy really finds himself the going is a whole lot better. I sure hope nothing stops the rising generations when they go searching for themselves."

Write for our free booklet containing a number of these typical success stories taken from our files. Chrysler Corporation, 341 Massachusetts Avenue, Highland Park 3, Michigan.



Chrysler Corporation

PLYMOUTH • DODGE • DESOTO • CHRYSLER • DODGE "Job-Rated" TRUCKS





THE DEMAND for oil products is now at an all-time high. And petroleum companies are doing all they can—expanding refineries, storage and distribution facilities—to catch up with the tremendous demand. During this "tight" situation you can help conserve gasoline by making sure your customers get the most mileage from every drop of gasoline. As part of your tune-up service, set the timing of your customers' cars to get the most out of high quality gasoline improved with "Ethyl" antiknock compound—give your customers all the power and performance they expect. Ethyl Corporation, New York, N. Y.



25 years' service to America's progressive petroleum industry

Products sold under the "ETHYL" trade-mark—Antiknock Compound... Salt Cake... Ethylene Dichloride... Sodium Metallic... Chlorine (liquid)... Oil Soluble Dye.



"Sweet music



The
Original Equipment
Line

c for your cash register"



HARRY LEHR
Lehr Distributors
New York City

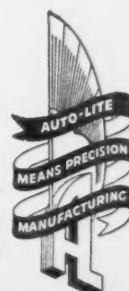


A. KASS
Broadway Nagle Service Station
New York City

"Let the cash register ring out the glad tidings. Your customers are happy because they have a battery that gives them a run for their money. You're happy because of the greater profit you get from each Sta-ful sale.' This statement of New York dealer A. Kass is typical of the way our dealers praise the Auto-Lite Sta-ful Battery.' Harry Lehr, Lehr Distributors, New York City.

HERE'S WHAT Sta-ful DOES FOR YOU

- 1 Gives you a real sales leader . . . a battery that needs water only 3 times a year in normal car use.
- 2 Turns in a sweet profit on every sale.
- 3 Reduces time and bother required for checking and servicing batteries.
- 4 Wins friends, boosts sales all along the line because the Sta-ful principle helps end a major cause of battery grief and failure.



KELSEY-HAYES

Wide-Base Truck Wheels

OFFER THE GREATEST TIRE MILEAGE
... WITH THE EASIEST SERVICING

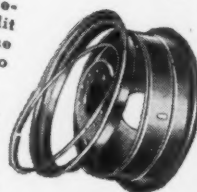
Increase Tire Mileage 20% to 50%:

- 1 Kelsey-Hayes wide-base truck wheels give greatest possible tire mileage by providing rim widths that are 70% of your tire widths.
- 2 Kelsey-Hayes wide-base truck wheels increase tire mileage by giving tread full road contact for uniform wear.
- 3 Kelsey-Hayes wide-base truck wheels increase tire mileage by keeping side walls straighter to reduce strain.
- 4 Kelsey-Hayes wide-base truck wheels support BOTH tire beads uniformly by full 5° tapers ... far superior to ordinary types.
- 5 Kelsey-Hayes wide-base truck wheels increase tire mileage by reducing tire running temperatures (as much as 60° cooler than average) and increasing air volume.



Designed for Quick Change:

- 1 Kelsey-Hayes removable one-piece flange ring and split reversible retaining ring save time and prevent water seepage into tire beads.
- 2 Kelsey-Hayes semi-drop rim base allows easier servicing of inner tube and valve stem insertion as only inner-tire bead need be released.
- 3 Kelsey-Hayes wide-base truck wheels reduce blow-outs because there is less rim flange deflection, thus less tire pressure.
- 4 Kelsey-Hayes wide-base truck wheels permit tire beads to be seated easier, yet eliminate chafing on rim flange.
- 5 Kelsey-Hayes wide-base truck wheels are lighter weight, and have many other advantages for lowering installation, servicing, and tire costs. See your K-H distributor today.



... ASSURES PROVEN PRODUCTS AT ...

KELSEY-HAYES WHEEL COMPANY

DETROIT 32, MICHIGAN

Wheels—Hub and Drum Assemblies—Brakes—"Vacdraulic" Brake Power Units—for Passenger Cars, Trucks, Buses—made by Kelsey-Hayes' 4 Michigan Plants and Windsor-Canada Plant • "Magdraulic" Electric Brakes—"Lathan" Vacuum Power Brake Equipment for Tractor-Trailers—made by Kelsey-Hayes' South San Francisco-Lathan Plant. Wheels—Hubs—Axles—Parts for Farm Implements—made by Kelsey-Hayes' French & Hecht Plant at Davenport, Iowa.



Willard

"SAFETY-FILL" BATTERIES

**Sell Quicker, Easier
at
Greater Annual Profit!**



Willard exclusive Safety-Fill construction provides automatic protection against overfilling. It guards the cables and other under-the-hood metal parts against damage and corrosion from acid spray.

WILLARD STORAGE BATTERY COMPANY

Cleveland

Los Angeles

Dallas

Memphis

Portland

Toronto

"THAT'S FOR ME," SAYS POLLY THOR



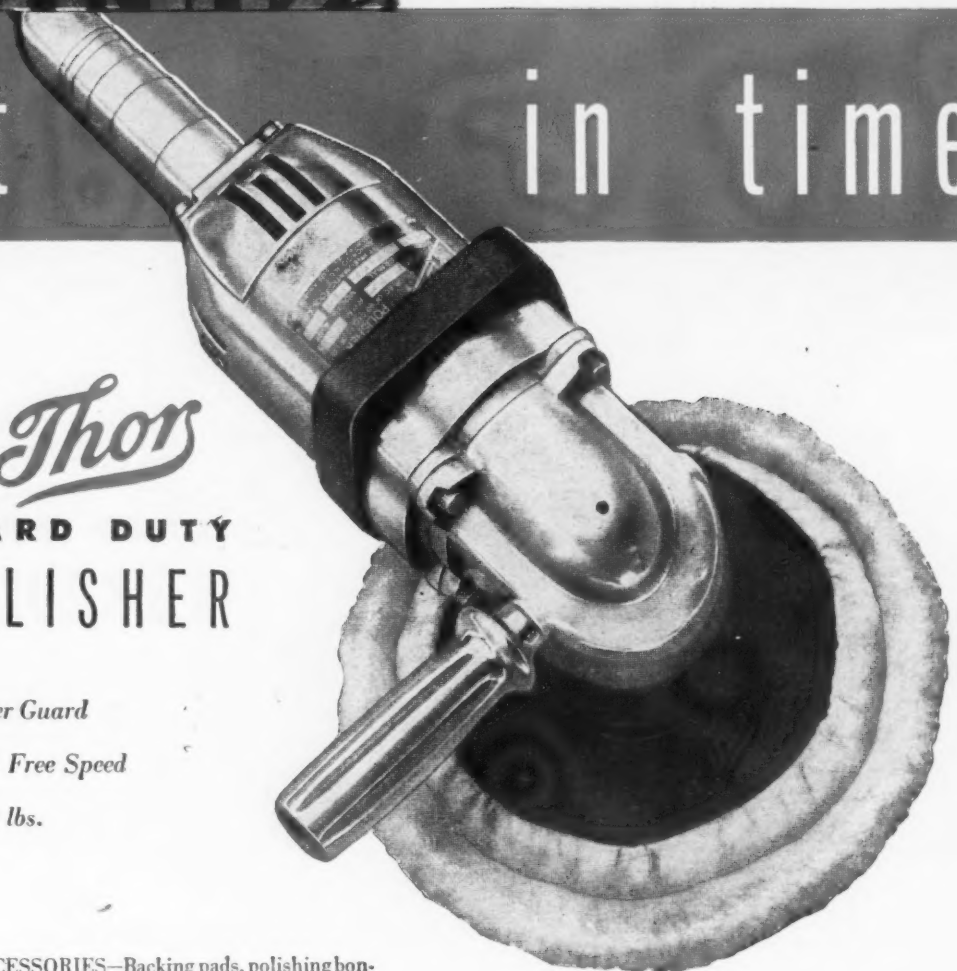
50% MORE
POWER

THAN ANY OTHER TOOLS
IN THEIR WEIGHT CLASS

Just in time

THE
NEW *Thor*
STANDARD DUTY
7" POLISHER

- Rubber Bumper Guard
- 1400 R. P. M. Free Speed
- Weighs only 9 lbs.



SPECIFY THOR ACCESSORIES—Backing pads, polishing bonnets, abrasive discs, built to stand up under the added power of new Thor tools are available through your Thor jobber.

"SAVES MORE TIME . . . MAKES MORE MONEY"

- Ball Bearings
- Rubber Bumper Guard
- Spindle Lock for Quick Disc Change

THE
NEW *Thor*
STANDARD DUTY
7" SANDER



for Spring tune-ups!

Here are two outstanding new Thor power tools to help you handle the extra volume of work headed your way this Spring. With half again as much EXTRA POWER over anything in their weight class, the new Thor Sanders and Polishers also feature ball bearings throughout, perfect balance for easier

handling, improved ventilation, right speeds, rubber bumper guards for tool and work protection.

Your Thor Tool jobber can show you how "Polly" (The Polisher) and "Sandy" (The Sander) can help you save up to 50% in time and labor on your body and frame jobs! Ask him about it today!

INDEPENDENT PNEUMATIC TOOL COMPANY

Aurora, Illinois

Export Division: 330 West 42nd St., New York 18, N.Y.

Birmingham
Los Angeles
Salt Lake City

Boston
Milwaukee
Seattle

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Chicago
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San Francisco

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London, England

Detroit

Houston
St. Paul

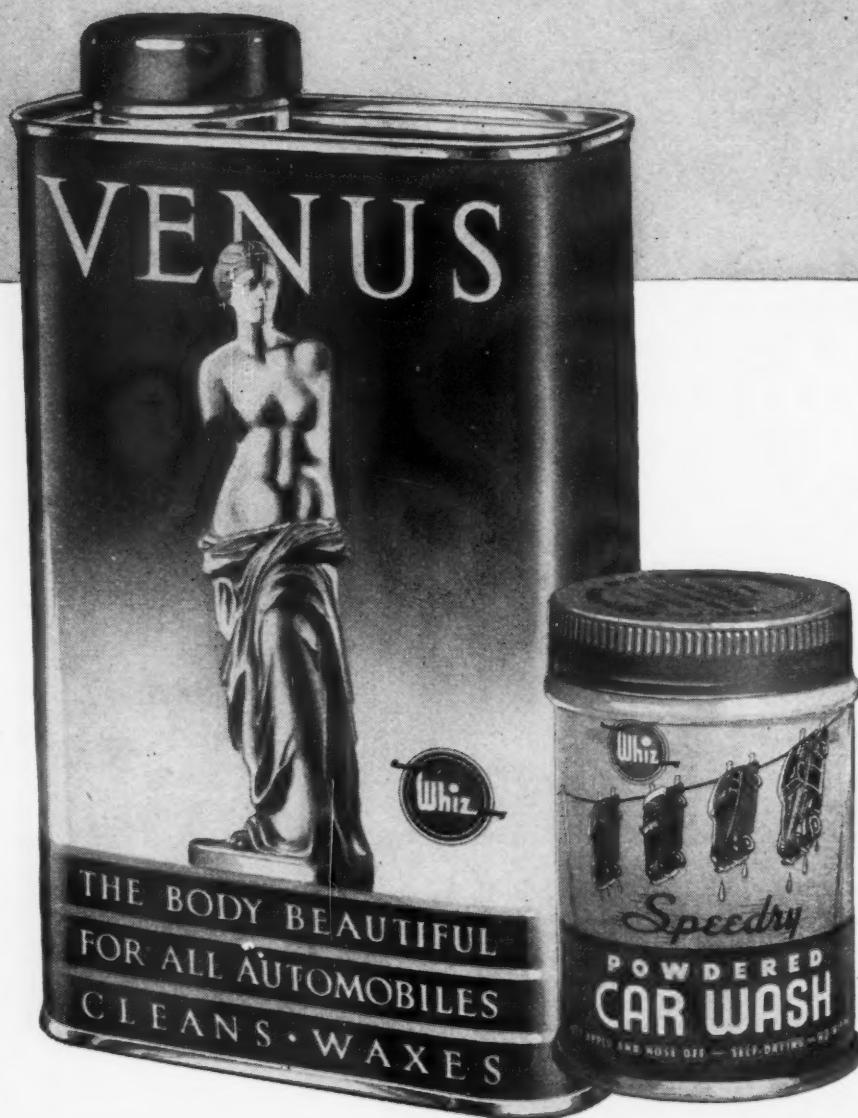
Thor

PORTABLE POWER

TOOLS

ONLY THOR JOBBERS SELL TOOLS FOR EVERY SHOP'S EVERY JOB!

WHIZ 60th



Two Fast-Selling Whiz Products for the Price of One!

VENUS POLISH cleans and waxes in one easy operation.

New, sudsy SPEEDRY Powdered CAR WASH does a better job in less time. Eliminates chamoising. Self-Drying.

Colorful, eye-catching display easel and window poster packed in every case.

ANNIVERSARY

Combination Offer!

A can of Speedry—at no extra cost—with a pint of Venus Polish! That's the offer you can make to car owners when you feature this great Whiz Special!

Here's what this new *Combination Offer* means to you! You get—at no extra cost—24 cans of Speedry with every 24 pints of Venus you order from your Whiz jobber. You get your full 66 2/3% mark-up and cash in on a program that's going to mean big business to Whiz dealers.

Join the Whiz 60th Anniversary profit parade *today* . . . ask your jobber for details.

PRODUCTS OF

Hollingshead

LEADER IN MAINTENANCE CHEMICALS



R. M. HOLLINGSHEAD CORPORATION. General Offices: Camden, N. J. Canadian Offices: Toronto
Warehouses: Dallas, San Francisco, Chicago



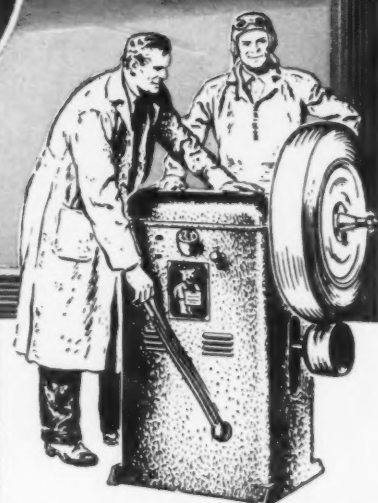
BEAR—First at the Races, First in Public Acceptance, First in Profit for You!

For 19 years Bear has safety-tested-and-corrected the 500-mile race cars at Indianapolis, using the same equipment used in Bear Safety Test Shops. Today *no car can race* without official Bear okay. This alone will convince any mechanical-minded man that Bear is tops in practical precision. But what interests a profit-minded shop man even more is the rising demand for Bear Safety Tests. Today twenty cents of every service dollar is spent for services such as Bear renders, and Bear leads in this rich

profit field. You owe it to yourself to get the facts!

To the public, Safety Testing means BEAR Safety Testing, for Bear advertises safety testing nationally. This makes your initial Bear Equipment pay for itself quickly; soon you add more Bear Equipment, "step-by-step," to get a still bigger slice of a business that's big and growing bigger!

Get the Bear "step-by-step" profit story from your Jobber, or write directly to BEAR MFG. CO., Dept. M-1, Rock Island, Ill.

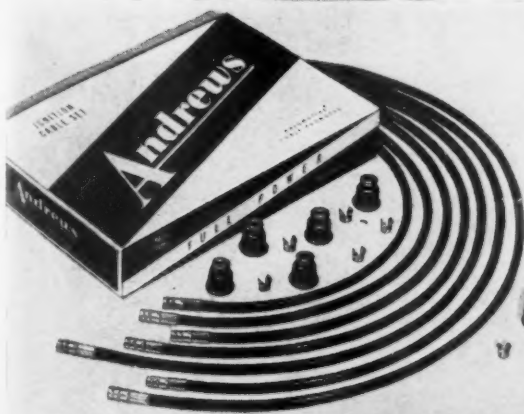


BEAR OFFICIAL SAFETY TEST
Indianapolis Motor Speedway
... another BEAR **PLUS!**

Bear Test and Correction is compulsory at the great annual race—great publicity for Bear Shops, convincing evidence of Bear Precision!

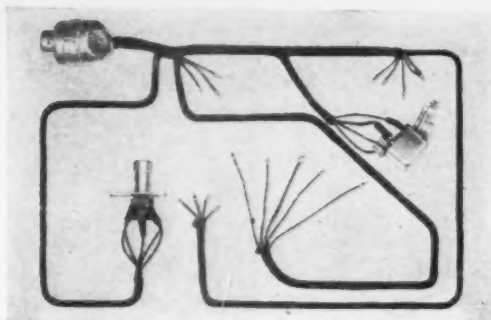
BEAR SAFETY SERVICE Nationally Advertised **POST**





THE ANDREWS LINE . . .

Your Best Electrical Connection

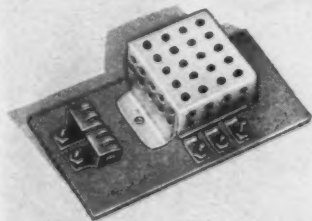
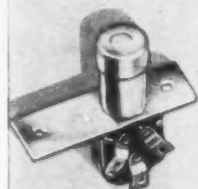
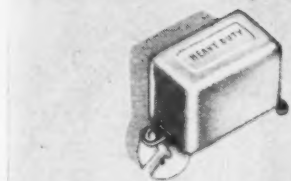


COMPLETE REPLACEMENT LINE OF WIRING HARNESS for Ford and Chevrolet

New Harness—new field for replacement sales and service. Andrews line takes care of Ford and Chevrolet passenger cars, commercials, and trucks,—1928 thru 1947. See full listing and description in Andrew 1948 catalog . . . now available.

CUSTOMER SATISFACTION SINCE 1921

Andrews
MANUFACTURING CO.
ST. LOUIS, MO.



| | |
|------------------------|---------------------------|
| Battery Cables | Voltage Regulators |
| High Tension Cable | Solenoid Switches |
| Primary Cable | Starter Switches |
| Ignition Cable Sets | Dimmer Switches |
| Harness for Fords | Lock Switches |
| Harness for Chevrolets | Cutouts . . . Relays |
| Battery Terminals | Circuit Breakers |
| Ignition Terminals | Coils . . . Brushes |
| Service Lights | Condensers . . . Contacts |

Plenty of COOL profits in this HOT line

**HARRISON
RADIATORS, HEATERS
THERMOSTATS**

You can't match the Harrison line for turning customers' heat problems into cold cash.

There are fast-moving *Harrison thermostats*, precision-built for accurate control of engine temperatures.

There are original-equipment *Harrison radiator cores* for replacement of damaged cooling units in leading makes of automobiles.

There are famous *Harrison heaters*, big ticket items, to sell customers who want real warmth and comfort for winter driving.

Long original-equipment leaders, Harrison products bring you a huge market, ready customer acceptance. Units for older model cars as well as for popular models are included in the Harrison line to take care of all your requirements . . . boost your profit opportunities.

Look into the Harrison line *now* and investigate *all* the nationally known United Motors Service lines listed below. Keep in mind, too, that United Motors Service gives these leading lines strong support with individually planned sales programs, action-packed merchandising aids, and latest catalog information. Talk it over with your United Motors distributor, or write United Motors Service direct.

**ANOTHER
PROFITABLE**

UNITED MOTORS LINE



HELP AMERICA
PRODUCE FOR PEACE



UNITED MOTORS SERVICE

DIVISION OF GENERAL MOTORS CORPORATION

GENERAL MOTORS BUILDING, DETROIT 2, MICHIGAN

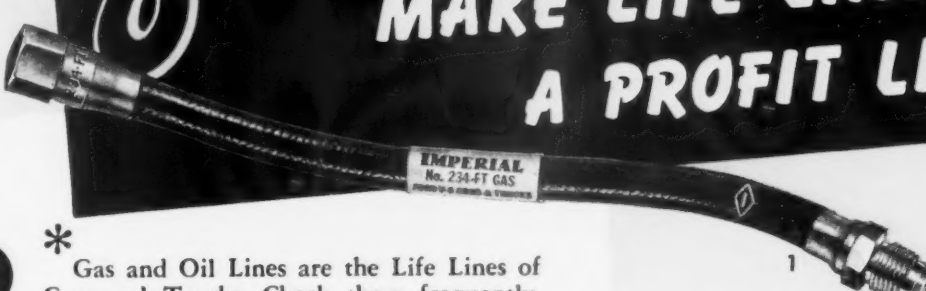
DELCO Batteries
AC Fuel Pumps, Gauges
and Speedometers
INLITE Brake Lining
SAGINAW Jacks

DELCO Radio Parts
HYATT Roller Bearings
DELCO Auto Radios
DUREX Gasoline Filters
KLAXON Horns
DELCO Home Radios

DELCO Shock Absorbers
NEW DEPARTURE
Ball Bearings
GUIDE Lamps
DELCO Hydraulic Brakes

HARRISON Radiators
HARRISON Heaters
HARRISON Thermostats
DELCO-REMY Starting,
Lighting and Ignition

6 POINT PROGRAM TO HELP YOU MAKE LIFE LINES* A PROFIT LINE



*
1 Gas and Oil Lines are the Life Lines of Cars and Trucks. Check them frequently. Make replacements with time-proven Imperial Parts.

2 **RIGHT AT YOUR FINGER TIPS!** All the most needed flexible gas and oil lines are included in this Imperial "Broad Coverage" Merchandiser. The 3-color steel rack prominently displays your flexible lines . . . really helps you sell . . . makes it easy to select the right line for the job . . . has ample space for expansion.

No. 161-FTB (illustrated) has 31 lines—covers over 90% of all jobs. \$14.90

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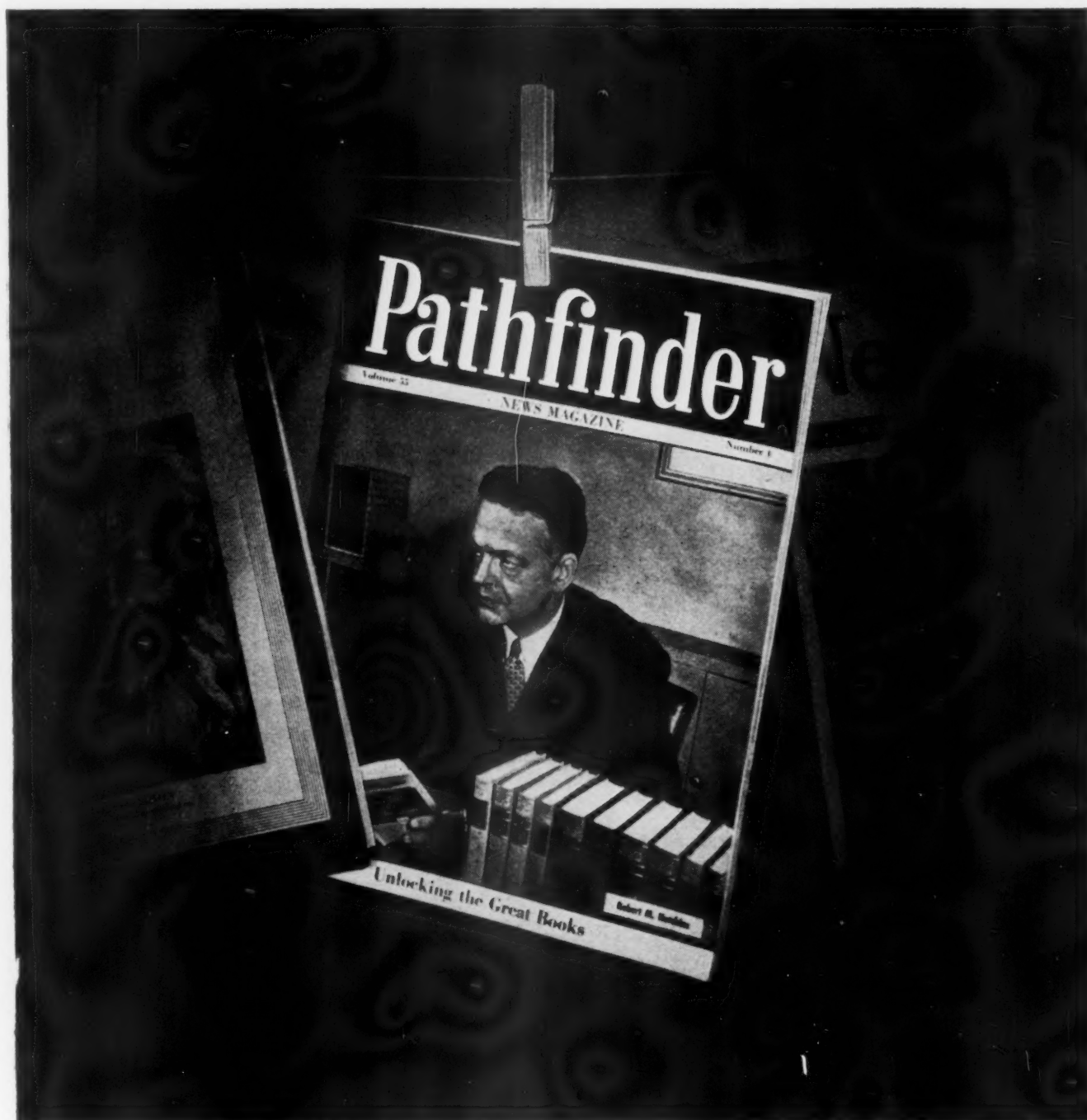
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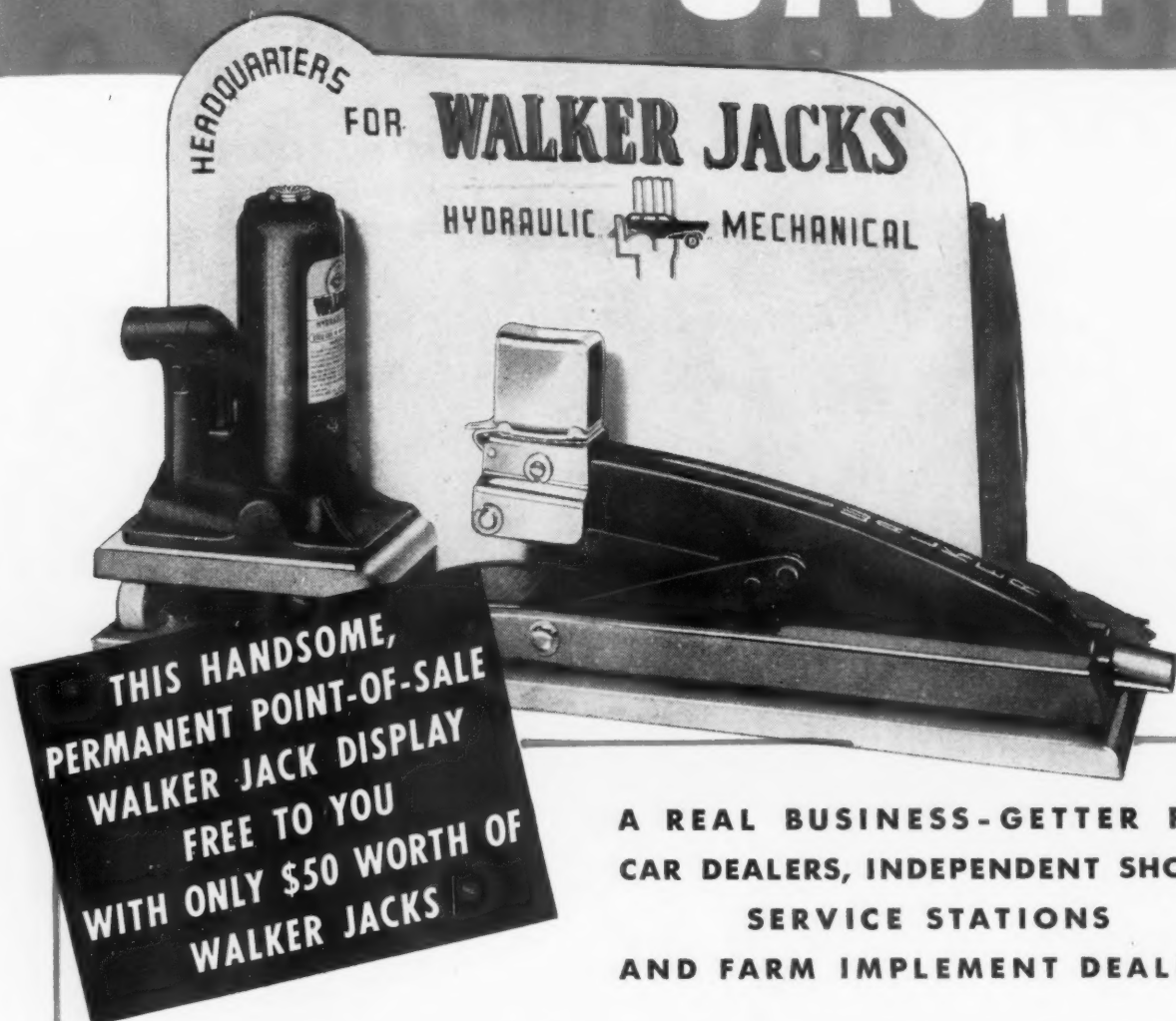
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MAY, 1948

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25

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"Positive action" mechanical type. Large enough and strong enough to assure safety and stability. Going up or coming down, its positive, mechanical "click action" inspires user's full confidence. Lifting Range: 5½" to 30¾". Capacity: 1000 lbs.

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| | SELLING PRICE | YOUR COST |
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| 2—No. 120..... | \$27.00 | \$18.50 |
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| 1—No. 906..... | 9.25 | 6.45 |
| 1—No. 925..... | 14.90 | 10.40 |
| 1—No. 930..... | 18.25 | 12.75 |
| 2—Qts. Hydroyl-50..... | 2.30 | 1.60 |
| TOTAL..... | \$77.45 | \$53.70 |

YOUR PROFIT \$23.75

No. 2

| | SELLING PRICE | YOUR COST |
|------------------------|----------------|----------------|
| 1—No. 120..... | \$13.50 | \$ 9.25 |
| 1—No. 906..... | 9.25 | 6.45 |
| 1—No. 925..... | 14.90 | 10.40 |
| 1—No. 930..... | 18.25 | 12.75 |
| 1—No. 935..... | 21.10 | 14.80 |
| 2—Qts. Hydroyl-50..... | 2.30 | 1.60 |
| TOTAL..... | \$79.30 | \$55.25 |

YOUR PROFIT \$24.05

No. 3

| | SELLING PRICE | YOUR COST |
|------------------------|----------------|----------------|
| 2—No. 120..... | \$27.00 | \$18.50 |
| 2—No. 647..... | 11.50 | 8.00 |
| 2—No. 906..... | 18.50 | 12.90 |
| 1—No. 930..... | 18.25 | 12.75 |
| 2—Qts. Hydroyl-50..... | 2.30 | 1.60 |
| TOTAL..... | \$77.55 | \$53.75 |

YOUR PROFIT \$23.80

No. 4

| | SELLING PRICE | YOUR COST |
|------------------------|----------------|----------------|
| 1—No. 120..... | \$13.50 | \$ 9.25 |
| 2—No. 647..... | 11.50 | 8.00 |
| 1—No. 906..... | 9.25 | 6.45 |
| 1—No. 930..... | 18.25 | 12.75 |
| 1—No. 935..... | 21.10 | 14.80 |
| 2—Qts. Hydroyl-50..... | 2.30 | 1.60 |
| TOTAL..... | \$75.90 | \$52.85 |

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TRADE-MARK

PRESTONE
TRADE-MARK
ANTI-FREEZE

IMPORTANT
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A booklet provided with this can contains directions for the mixing and use of "Prestone" anti-freeze, and also a table showing the quantity needed. To get satisfactory results read the booklet carefully and follow the directions.

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PRODUCT**

**DOES NOT BOIL AWAY
PREVENTS RUST**

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**RETAIL PRICE
\$3.50
PER GALLON**

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FOR 1948
*A record supply of
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but still probably not enough!*

Frankly, there probably won't be enough "Prestone" anti-freeze to meet all consumer demands. There are many reasons for this—more cars, increased purchasing power, an ever-growing demand for America's Number One anti-freeze. We are continuing to expand our production facilities as quickly as possible, to keep pace with the increasing popularity of "Prestone" brand anti-freeze.

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Accurate!
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Packed with tester: Completely new manual on cooling system care. Developed by Society of Automotive Engineers, Inc. See your "Prestone" anti-freeze agent.

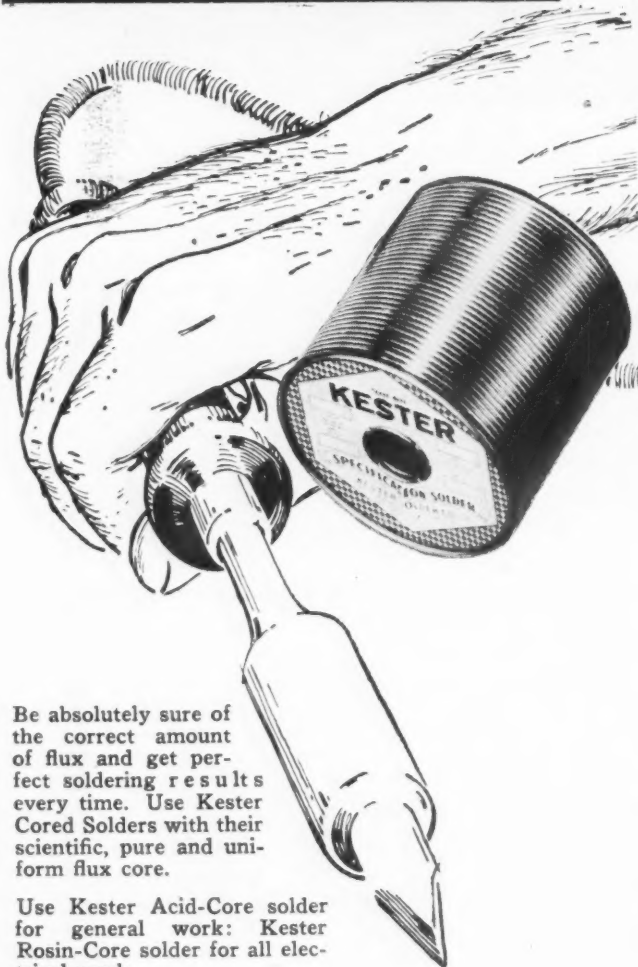
*The freezing protection of "Prestone" anti-freeze is unchanged—no new protection charts are necessary. However, specific gravity of "Prestone" anti-freeze has changed, which makes old testers read inaccurately with this new product.



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FOR AUTOMOTIVE SERVICEMEN

VOL. LXVII, No. 6

May, 1948

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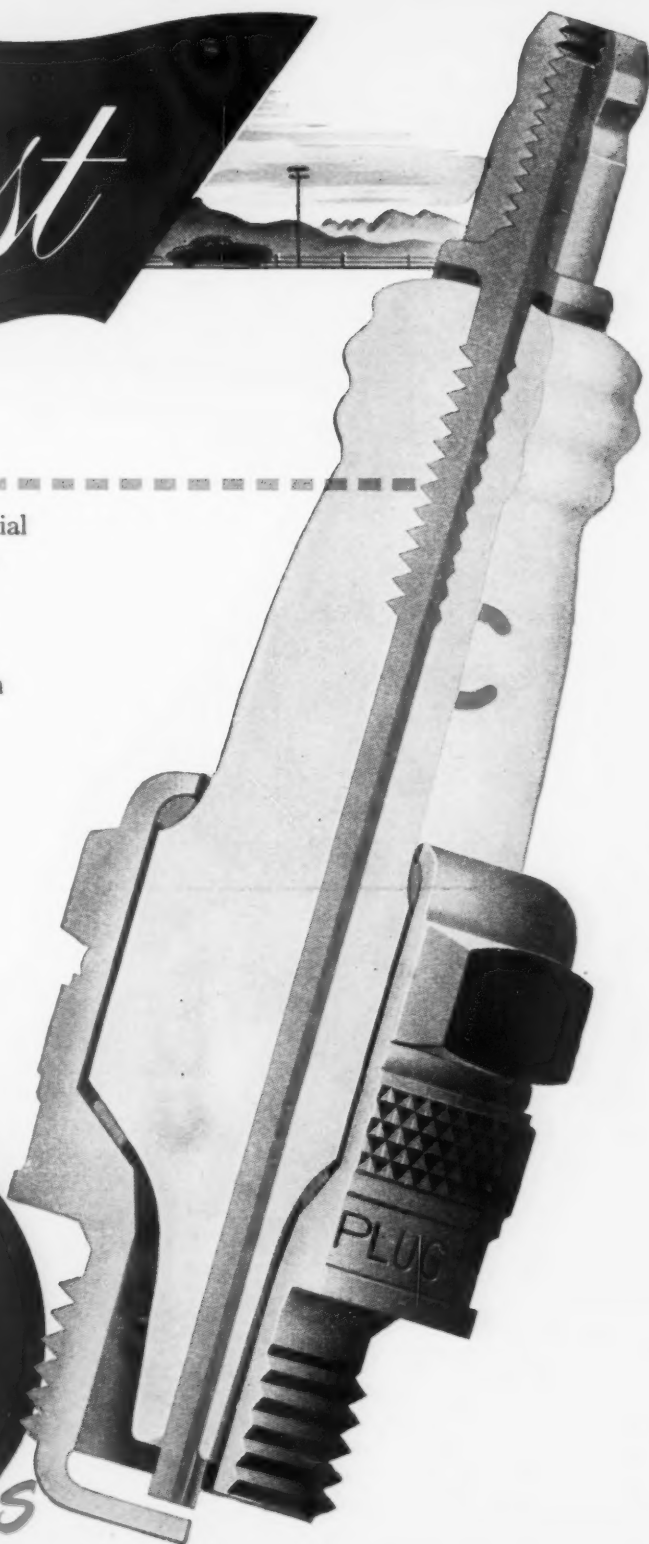
PAUL WOOTON, Washington Member of the Editorial Board



in ceramics

AC's new patented aluminum oxide insulator material is another "first" in the manufacture of spark plug ceramic insulators. As early as World War I, AC developed the *first practical ceramic aircraft spark plug*, for Liberty engines. It was perfected and ready for World War II—and its ceramic aluminum oxide insulator material was used in spark plugs exclusively by American war planes.

Now you can supply your customers with that same patented aluminum oxide insulator material in AC Spark Plugs especially designed for their car, truck or tractor engines—plugs that can take terrific punishment—plugs whose wider Heat Range adapts them to a wider range of engine temperatures. For easier starting—better idling—steadier firing under heavy load, sell AC's. They give *utmost reliability*.



AC's new patented aluminum oxide insulator material has revolutionized spark plug performance to a degree that no car, truck or tractor owner can afford to overlook. That means profits for you. There will be a big demand for these new AC's. They're self-cleaning — resistant to oxide coating — and they save time, maintenance and plug cost. Get a supply from your AC wholesaler.

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• RUGGED INTERNAL CONSTRUCTION
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assures correct shape and increased bearing area at operating temperatures

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for lower and more uniform temperature throughout piston

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This, That and the Other

- ★ **SUMMER SERVICE PEAK.** With new car orders backlogged at new peak levels and with 1948 car production estimates being revised downward, owners are turning to the service dealer with the cars they now own.
- ★ **NEW ENGINE USES 100 OCTANE GAS.** Although no one is thinking in terms of automobile engines with compression ratios of 12.5 to 1 as a near possibility, General Motors has proved that it is possible to drive a car equipped with such an engine cross country using available fuels. Company's engineers drove a car with 12.5 ratio from Detroit to Texas, fueling at airports with 100-octane gasoline.
- ★ **SAN FRANCISCO IN 1949.** Plans for the 1949 Convention and Equipment Exhibition of National Automobile Dealers Assn. are announced. It will be held in San Francisco, Jan. 24-27, 1949.
- ★ **SOLDIER MECHANICS.** One in every 25 World War II veterans training under the G. I. Bill is learning to repair automobiles, tractors, gas and diesel engines, a V. A. survey shows. Of 113,289 veteran-trainees, 61,863 are enrolled in on-the-job training programs; 51,426 are taking courses in trade and industrial schools.
- ★ **KEEP 'EM COMING.** Clearing House letters and Shop Kink suggestions addressed to Jack Montgomery, MOTOR AGE Technical Editor are being received and handled in ever-growing numbers. Jack is glad to help you. He says, keep 'em coming.

Frank P. Tighe

EDITOR.

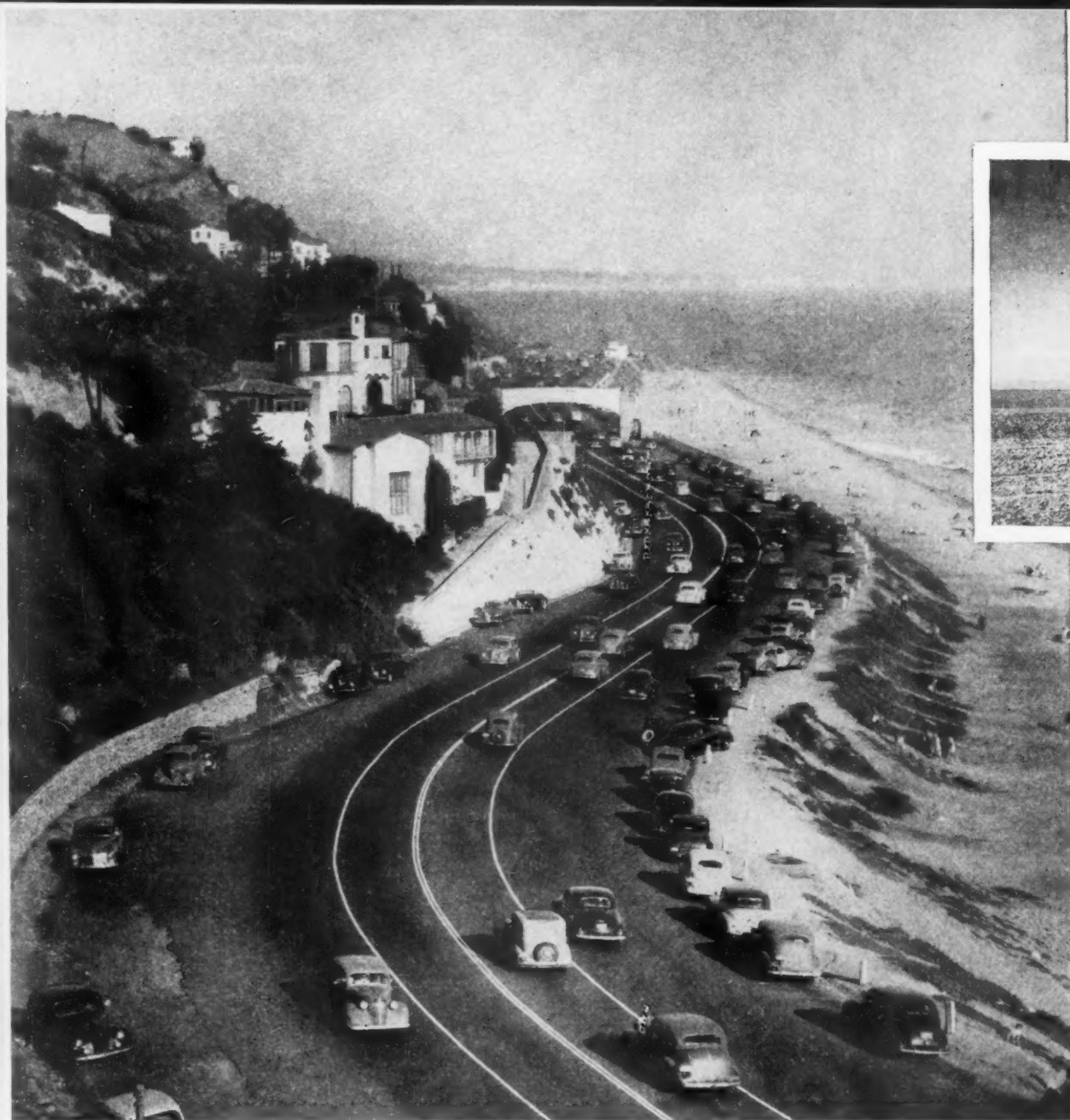


Photo: Ewing Galloway

How to Provide Maximum Gasoline Mileage

1. PROMOTE BETTER DRIVING HABITS

Avoid unnecessary driving
 Curtail excessive high speeds
 Cut out "jack rabbit" acceleration; excessive use of low gears
 Don't race engine; avoid engine idling

2. SUGGEST FUEL SAVINGS TO FARMERS

Don't let engines idle unnecessarily
 Haul full loads; make one trip do for many
 Keep machinery in good working order
 Anticipate tractor and truck fuel needs

3. CHECK IGNITION AND TIMING FOR:

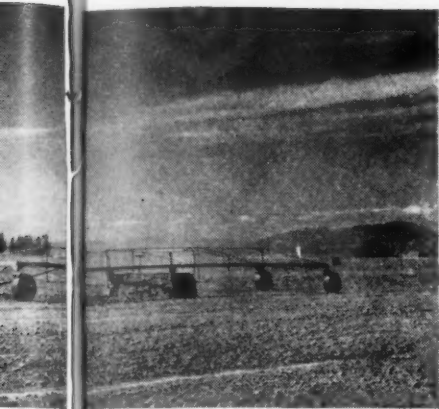
Faulty spark plugs
 Weak or defective coil
 Faulty distributor vacuum or centrifugal advance
 Incorrect valve or ignition timing

4. RESTORE COMPRESSION BY REPLACING:

Pitted, burned or warped valves
 Sticking valves
 Worn valve guides
 Weak or broken valve springs
 Worn or stuck piston rings

5. INCREASE FUEL SYSTEM EFFICIENCY BY SERVICING:

Faulty accelerating pump plunger
 Clogged air cleaner
 Improperly operating heat control
 Incorrect float level
 Defective fuel pump diaphragm
 Incorrect fuel pump pressure
 Leaking fuel line
 Incorrect metering pin adjustment



by FRANK P. TIGHE

**Supply of Gasoline May Equal Demand,
But Increase in Car Driving and Use
of Farm Equipment Raises Question:**

Will Gasoline Pumps go Dry?

IN the United States, the average passenger car will be driven 10,796 miles this year, reliable estimates indicate.

Three million farm tractors are busy from dawn to dark producing food for the world.

The U. S. demand for finished petroleum products in 1947 was 14 barrels for every man, woman and child . . . an increase in consumption of 12½ per cent over the preceding year and of 25 per cent over 1941.

It is evident from both government and petroleum industry sources that conservation of gasoline and other petroleum products, in this period of unprecedented demand, is essential to the national economy.

As this is written, there are local or spot shortages of gasoline and tractor fuels, a condition that may continue throughout the summer, but the threat of a "gasoline drought" seems improbable.

In fact, the petroleum industry has geared itself to meet a normal increase in demand (over 1947's record-breaker!) not only at the gas pump but on the farm as well. And, there's no gainsaying the fact that the petroleum boys are dead set on keeping the home fires burning next winter.

The current, widespread discussion on

conservation of fuels tends to understress an important angle — the efficient performance of 37,327,000 motor vehicles in operation. In this the automotive service dealer can play a vital part.

These men—car dealer service managers, repairmen, service salesmen, mechanics, farm equipment specialists—are the key points-of-contact with the automotive user of petroleum products. Not in the manner of the gasoline jerker, but in the broader sense of being able and equipped to provide maximum gasoline mileage on any piece of automotive equipment.

Thus MOTOR AGE readers can carry out the important and responsible task of raising the operating efficiency of all cars they service. That, in part, is the answer to the question: Will gasoline pumps go dry this summer?

With the peak of the motoring season approaching, and with farm equipment in heavy use — five steps

CONTINUED ON PAGE 70



1. Remove two screws holding vacuum advance unit to distributor and lift off the unit. When installing vacuum unit the connecting link should be bent so that there is a very slight tension on breaker plate but link is still free to move on the base plate pin.

2. Remove two screws holding breaker plate assembly in place and lift out the unit. When installing breaker plate, assemble hold down clamps with concave slides down so bearing is held securely in place.



Servicing **Distributors** on **Chrysler Products**

By following this step-by-step procedure, Chrysler Auto-lite distributors can be serviced simply and accurately, covering many points often overlooked

THE following points should be remembered and checked when overhauling: If a distributor tester is not available, a wire gage is more accurate than a feeler gage to use when setting point spacing. Always check breaker arm spring tension as it is very important. If tension is too great, the breaker arm will bounce and cause a slight miss in the engine. If tension is not strong enough, the rubbing block will not

follow the cam and will also cause a miss. Spring tension can be adjusted by sliding the spring forward or backward under the screw which fastens the free end to the breaker base plate. When using points with separate breaker arm springs, there is a difference in the shape of the spring for clockwise and counter clockwise rotation. The only way to determine the right direction is to compare the two and then order by part number.

by
JACK MONTGOMERY





3

3. Remove ball bearing from the base and check for roughness and wear. If it shows any signs of wear it should be replaced.

4. Remove cam lock and lift off the cam. Examine cam stop plate and cam for wear.

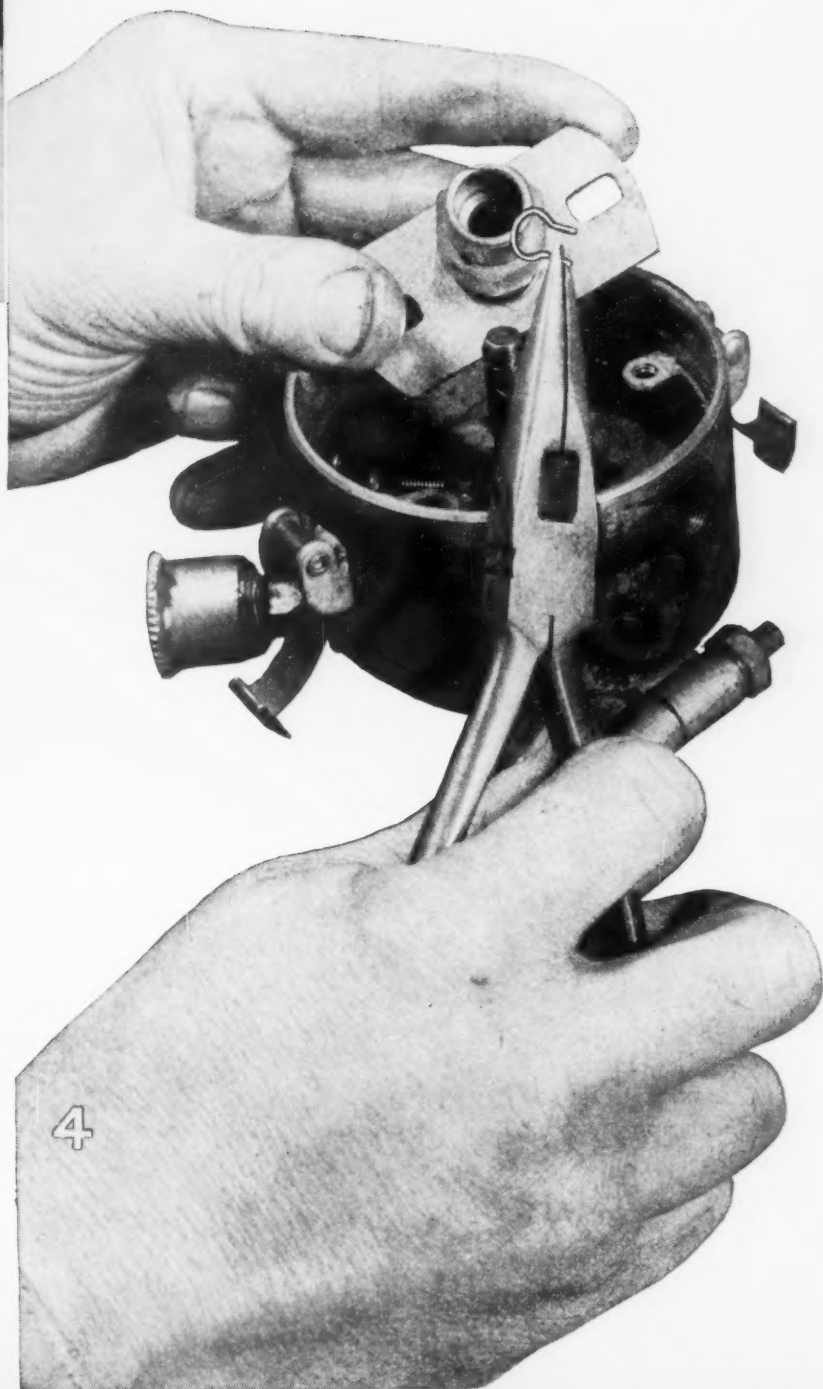
5. Drive out the pin holding drive shaft collar. Then remove the shaft and governor weights as an assembly. If shaft is worn replace both bushings and shaft.

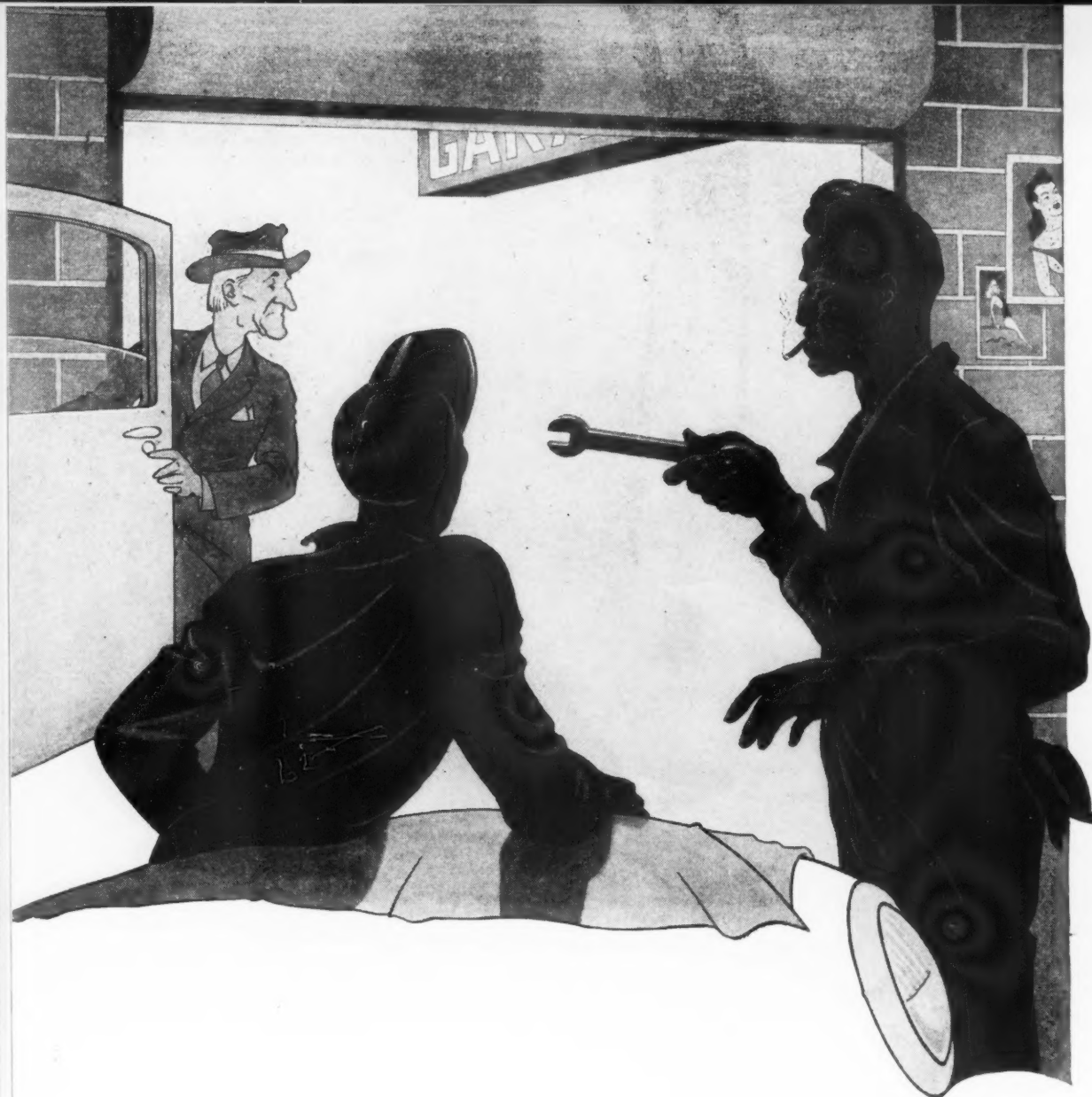
6. Installing cam spacer. Always make sure that this spacer is installed as some replacement shafts are supplied without spacer.

7. Centrifugal advance is adjusted by bending spring brackets. The first few degrees advance and maximum advance are controlled by the soft spring. The heavy spring should be adjusted for all intermediate spark advance.

8. Vacuum advance is adjusted by adding spacer washers. Removing washers increases vacuum advance. Vacuum chamber can be tested for leaks by applying 20 in. of vacuum to chamber. If gage reading stays at 20 in., vacuum chamber is O. K.

9. Adjust cam angle by opening or closing the movable point until desired cam angle is obtained.





"Go over and cheer him up," said Larry with a flirt of his open end wrench. "If that face of his gets any longer, he'll trip over his chin."



"Buzz" Sawyer, the spindly, middle-aged clerk from Al Toomis' grocery store, had never been known as a hilarious man, but this afternoon, as he stepped out of his battered Oldsmobile in Pop O'Neill's shop, he looked as if he were weighted down by the cares of the world.

"Go over and cheer him up," said Larry to Tommy Winters, indicating Sawyer with a flirt of his open-end wrench. "If that face

of his gets any longer, he'll trip over his chin."

Tommy took a quick glance at Sawyer's woebegone countenance. "Maybe," he said, "his house burned down."

Larry laughed. "It don't have to be that bad to get Buzz down," he said. "I've seen him almost bust out cryin' because the Reds lost a ball game."

"He ought to be used to that . . . The Reds never win."

"No, but Buzz figures they always got a chance, as long as the Phillies is in the

Pop puts the Screws to a Clutch Problem

As soon as Pop caught on to the short and the long of this clutch problem he knew he could easily put the screws to it



illustrated by
FERD OBECK

by **J. EDWARD FORD**

Larry started to scratch his head but caught a glimpse of his greasy fingers and compromised by rubbing his jaw with the comparatively clean back of a hand. "I kinda remember now," he said. "We slipped in a new clutch disk and cover assembly, didn't we?"

"I don't know," said Sawyer. "Pop told me he'd see it was fixed. But it isn't."

"Still chatterin', you mean?"

Sawyer shook his head.

"Then how's it actin'?"

"Starts shaking like it had the ague when I race the engine to get it warmed up in the morning. It does the same thing when I'm rolling along at a good clip and have to throw out the clutch."

"That's easy," said Larry. "We can take care of that for you."

"But when?" asked Sawyer stubbornly.

"Soon as we get around to it."

"Pop always gives me a definite time."

Larry shrugged. "Things is hummin' around here," he said. "We can't make no

same league with them. And he's right."

By this time, Sawyer had approached within hearing, and Larry quickly changed his line of chatter. "Back so soon?" he asked.

Sawyer nodded dolefully.

"Somethin' wrong?" asked Larry.

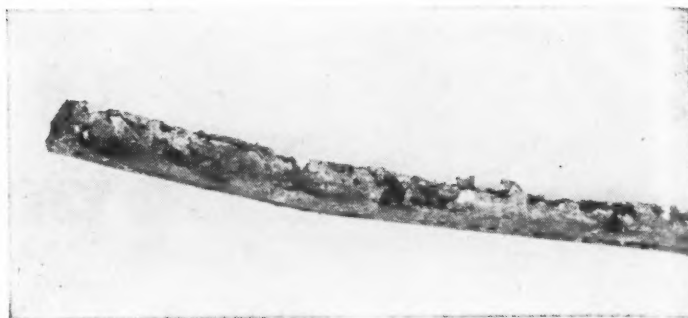
Sawyer nodded a second time. "Clutch again," he said.

"You musta talked with Pop when you had your car in yesterday. What was the trouble?"

"Clutch chattered."

CONTINUED ON PAGE 74

In the Spring a young mechanic's fancy turns to cooling systems, if he has his customers' interest and his own business in mind



by ALBERT J. BERKOW

Cooling System Troubles

"**H**ERE comes another geyser, Mac! Fourth one today, too. Yep, they never miss the water till the steam flies high!"

Conversation of this kind is common with winter over and warm weather well upon us, and now is a good time to review cooling system servicing, ailments, tests for locating the difficulties, the remedies available, and to consider preventive measures.

Cooling system maladies at this time of year can be boiled down to one major diffi-

culty—overheating. The things to consider when approaching the problems are first of all, the tests to be made to locate where the trouble lies; and second, how to repair the damage.

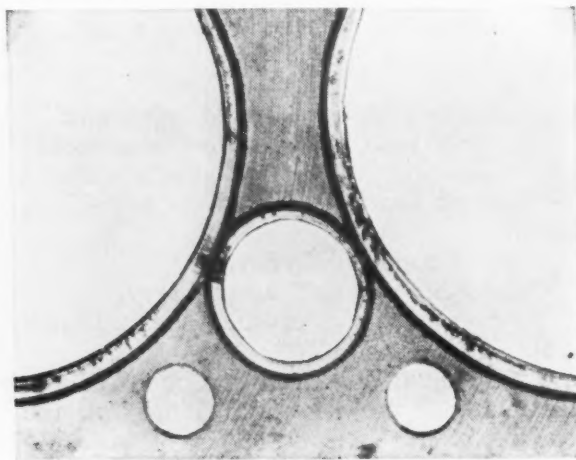
To locate the cause of overheating, a check-off list including all the following points should be followed.

First is leakage, and all possible points should be checked for any water dripping or seepage. These points include the radiator core and tank seams, drain cocks, hoses

First, carefully examine radiator core, tank, and hoses for evidence of seepage or dripping of water.



A bad head gasket can cause either an external leak or send water through the engine and out the exhaust.





Water distribution tubes should be replaced when excessively corroded.

and Their Cure

and connections, water pump, head studs, head gaskets, expansion plugs and side cover plates. Stop leak preparations may stop some type leaks effectively while others will have to be corrected by repair methods.

After leakage is prevented be sure that the water level is up to within an inch or two of the filler. Next check the fan belt for good condition and proper tension. If it is frayed or oil-soaked it should be replaced. The fan or water pump shaft should be checked for correct alignment and play. See

that bugs and other foreign matter are blown out of the core with air pressure (rear to front) so that the flow of air is not obstructed. The block should be clean to allay unwanted insulation. These are easy quick-check items.

Next consider the thermostat. While a broken thermostat usually sticks in open position, this is not always so, and moreover it is not uncommon for a thermostat that should open at 140 degrees or 160 degrees to be

off its opening temperature to a noticeable extent causing irregularity. The thermostat can be tested by removing it and suspending it in a pan of hot water with a thermometer to see if it is functioning properly. In a cool running motor a thermostat set above 140 degrees in summer is desirable since it has been shown that greatest engine wear is encountered at low temperatures (actually there is 4 times the excess wear on the cylinders at water temperature of 34 degrees

CONTINUED ON PAGE 84

A cold running thermostat can cause as much wear on an engine as one which is causing engine to overheat.



After reverse flushing, use gun to blow accumulated bugs out of the core, working from rear to front.





"BUT YOU ADVERTIZED
HOSE CLAMPS!"



"SHE'S TRYING TO GIVE ME SOME
IDEA OF THE SORT OF HOOD
ORNAMENT SHE HAS IN MIND"

| | | | | | |
|---|---|---|---|---|---|
| C | O | N | Y | F | M |
| L | D | W | R | E | D |
| E | C | A | S | O | U |
| K | M | H | T | B | N |
| G | O | I | L | R | E |
| U | X | C | W | A | B |

Hidden in this letter box are the names of sixteen Indianapolis winners of the past, with five pictures supplying clues



15

14



1



13

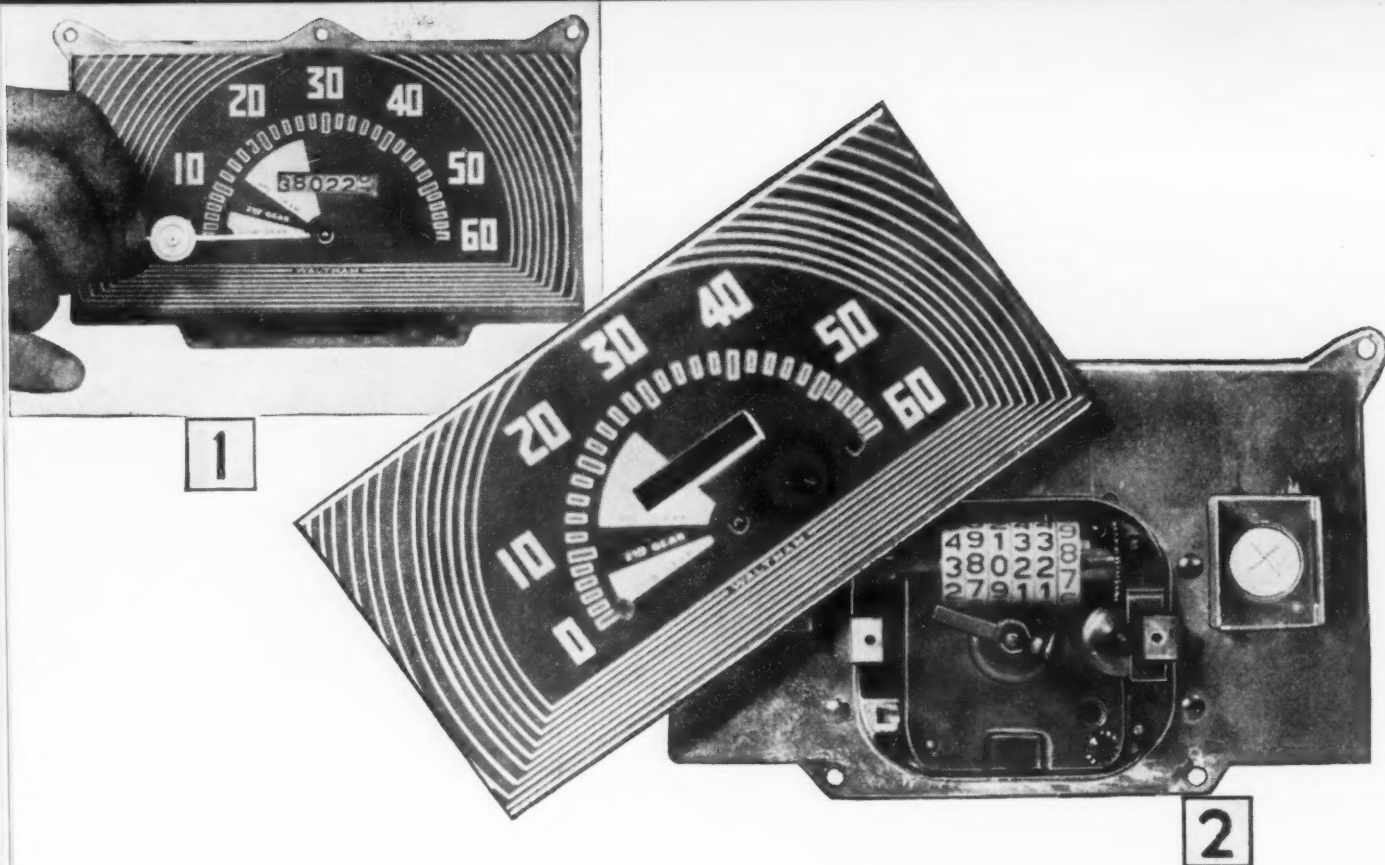


16

Can you pick the WINNERS?

ONCE again it's time for the Indianapolis 500 Mile Big Car Race, and although most of us can't be there to see it, we will be there in spirit, at least. And while the racing atmosphere prevails, let's look back over some of the speed kings who have roared down the track to fame and glory in years gone by. See how many of these champions you can identify. For instance, start with "S" in the third lane down.

Continue by trial and error with any letters which touch, on any sides or at the corners. Following around the course we proceed diagonally to "H" and then up to "A", finishing with "W". Thus we have identified our first winner, SHAW, first place winner in 1937, 1939, and 1940. With a possible top score of 16, a good racing fan should be able to identify at least 12 winners of America's greatest auto classic. Answers on page 100.



Servicing the **WALTHAM**

Many excessive fuel consumption cases, said to be "incurable", can be traced

VERY OFTEN poor gas mileage is blamed on the engine or the carburetor when actually speedometer is at fault. Every engine at a certain speed will give better mileage. Usually the best gas mileage is obtained at speeds between 35 to 45 M.P.H.

If the speedometer shows no speed or mileage the cable or casing is probably broken.

Most cables are broken due to lack of lubrication or a sharp bend in the casing. Some cables will break because the speedometer mechanism breaks and binds in which case the speedometer head should be checked before installing a new cable or casing.

A quick and easy check can be made without removing the head by using an old cable about 4 in. long with a tip to fit the type on which you are working. Insert short cable in socket and spin between finger and thumb in the direction that

CONTINUED ON PAGE 90

1. Remove the speed-indicating needle from the shaft by turning needle past zero and pulling outward. Special puller not necessary.

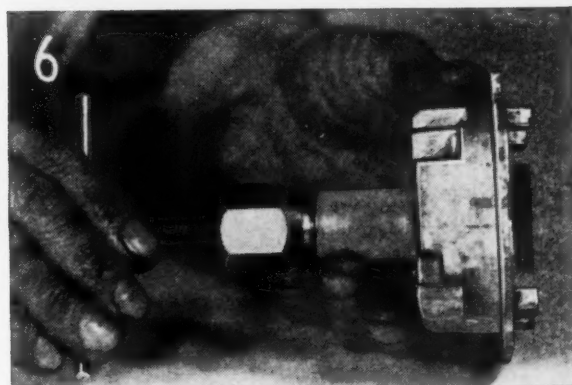
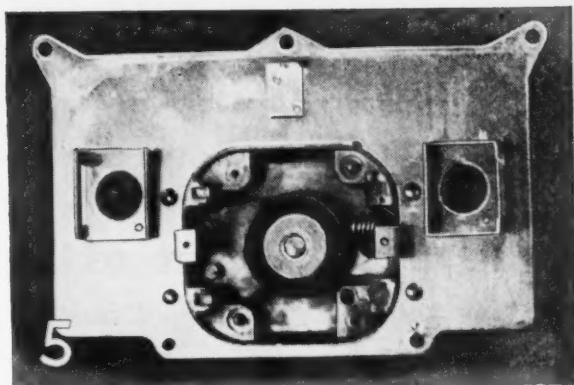
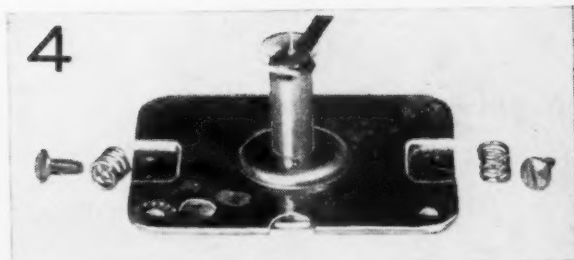
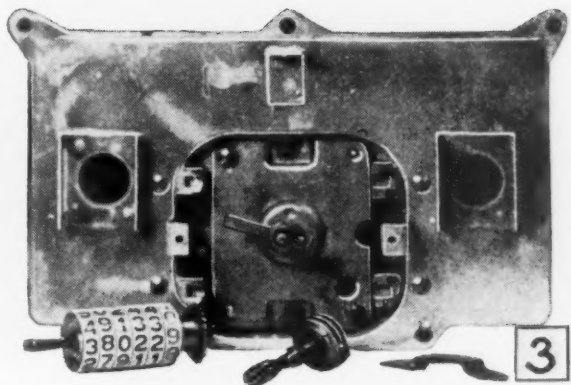
2. Take out the screws holding the face of speedometer to the base plate and remove the face.

3. Pry off the numeral roll and drive-gear retainer and remove the numeral roll and drive gear.

4. Remove the two screws and springs holding the speed cup plate and take out the plate assembly.

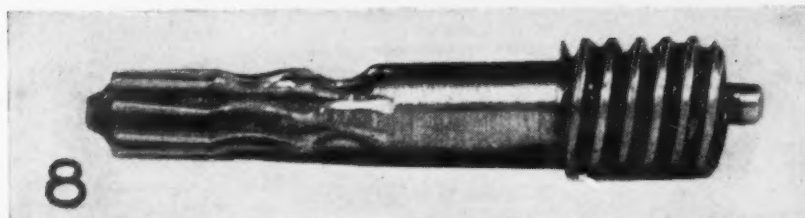
5. Take the speedometer mounting plate off the main body casting.

6. Using a special tool, push the magnet and main drive-gear-shaft assembly out of the housing.



Speedometer

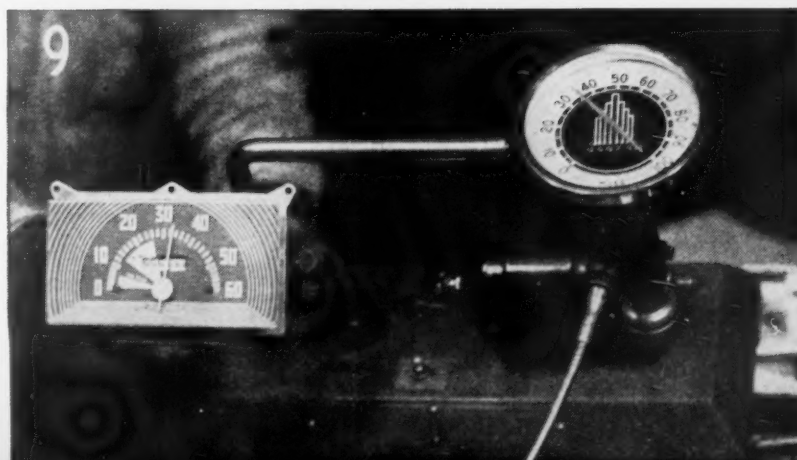
down to inaccurate or defective speedometers



7. Damaged worm gear on main drive shaft.

8. Damaged gear on second speed shaft.

9. After new parts are installed and the speedometer reassembled, the instrument should be calibrated against a master speedometer head.



The Italians, through excellent workmanship, have overcome many wartime difficulties to produce such automobiles as are illustrated on these pages

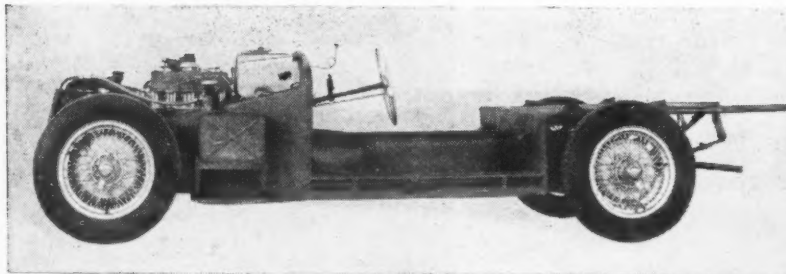


The Fiat coupe with body by Chia. Intended to be a moderate price car, the hand-processes used to-day in its manufacture still preclude such a policy.

ITALIAN CARS

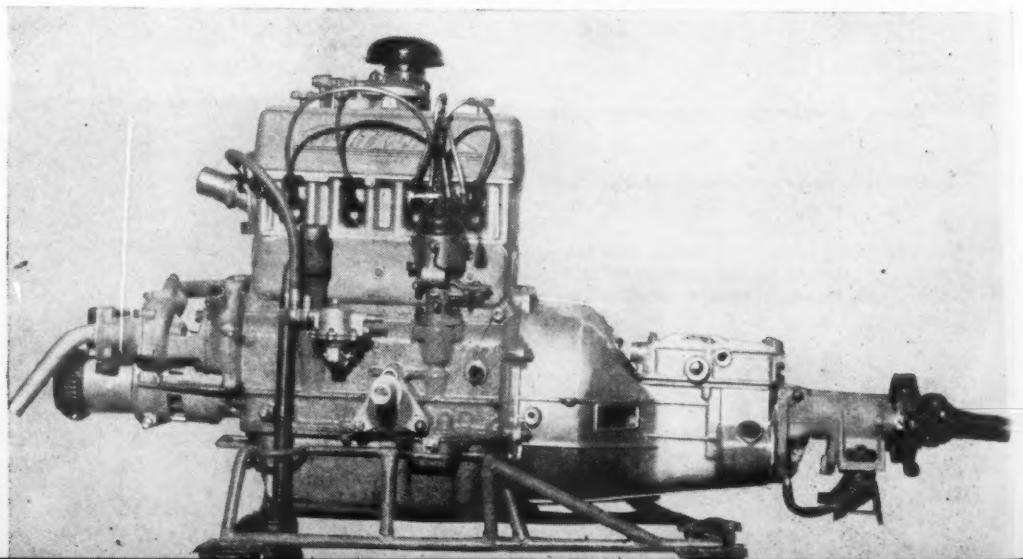
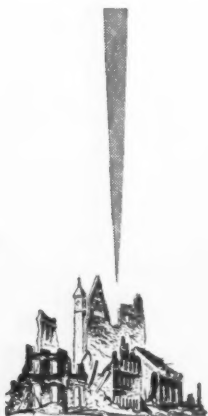
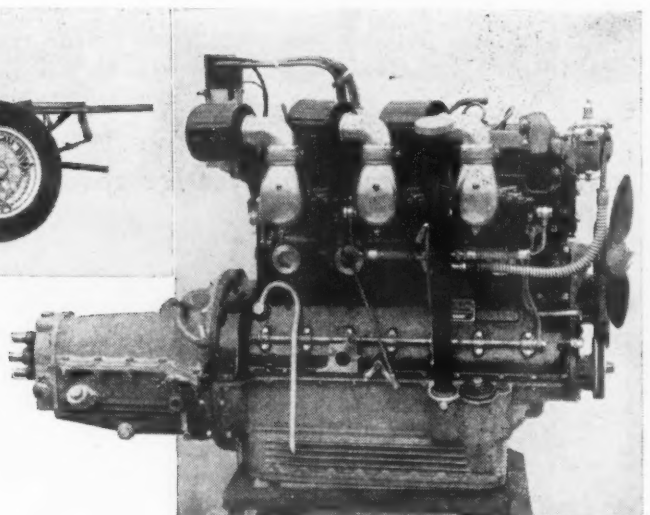
Out of Italian Ruins

Right side of the Alfa Romeo Super Sports motor. It delivers 110 brake horsepower at 4,800 rpm.



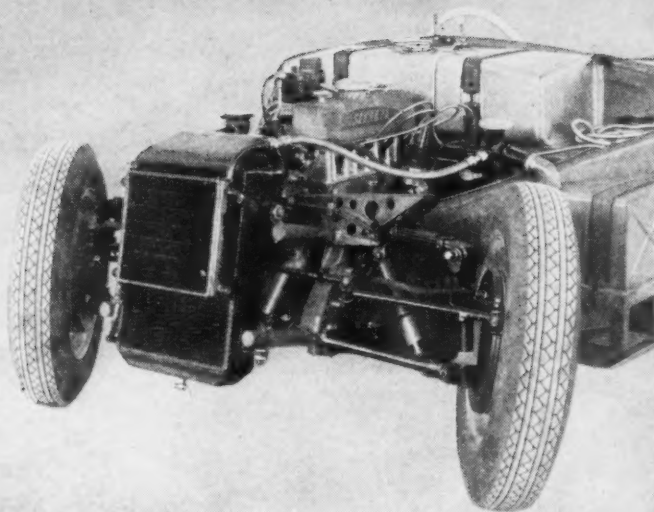
With spoke wheels, still considered very smart in European design, this Cisitalia Chassis has a tremendous amount of power hidden in its hand-milled engine, so carefully made for tolerances that it requires little or no gasketing.

The Cisitalia engine has been bored out and made almost entirely by hand and has made the use of gaskets unnecessary because of its precision.





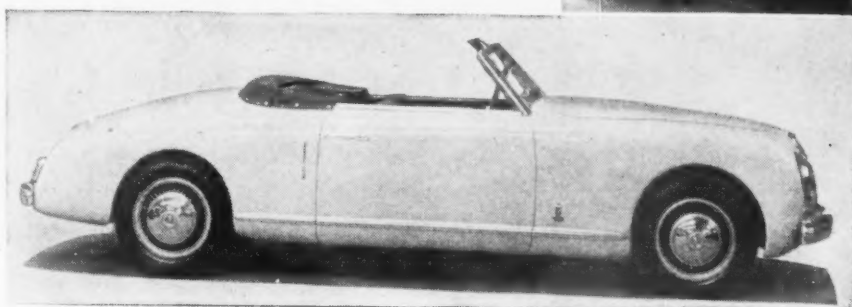
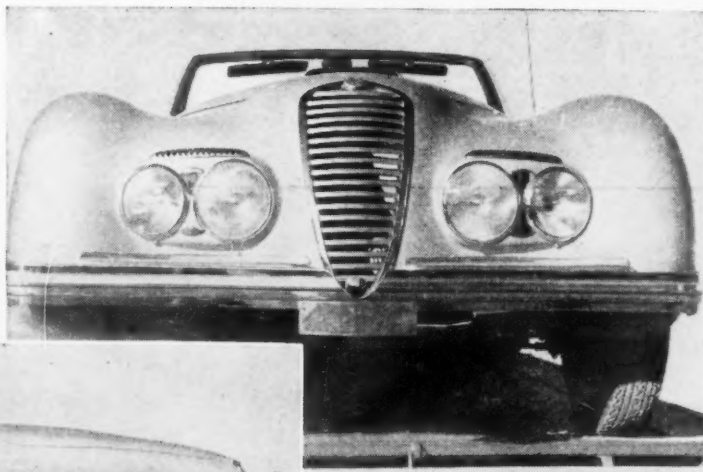
Chrome is used with moderation on this slick Lancia roadster at the Pinnin Farina plant where it has just been completed after weeks of arduous hand-labor.



The Cisitalia engine in the runabout model, that can develop speeds exceeding one hundred miles per hour. It is almost entirely hand made, also.

Wide and low-slung like its American forebears, this Alfa model from the plant of Pinnin Farina in Turin is entirely hand-made despite its slick surfaces.

The influence of American design can be seen in this Alfa Farina Convertible. The "pontoon" fenders that run the entire length of the car are a distinctive mark in this direction.



Lower left. This Alfa-Farina has been made and assembled almost entirely by hand—a costly process that severely limits production until such time as machinery can be restored to the factories.

For sportsmen the world over, this glowing red Cisitalia runabout can build up to speeds over 100 mph. Under its flat hood lies an engine turned out entirely by hand.



FACING YOUR WAY



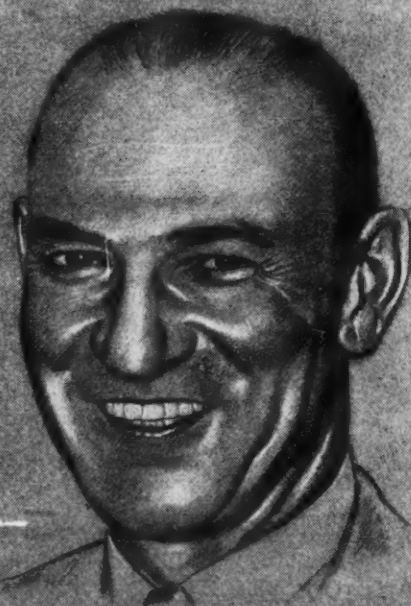
W. N. POTTER, General Manager of United Motors Service has been elected to serve a second term as president of the Automotive Electrical Association



PAUL G. HOFFMAN, recently resigned as president of Studebaker in order to fill one of the most important posts in the world, Economic Cooperation Administrator



JOHN P. CRISCONI, Oldsmobile dealer, serves as Treasurer of the Philadelphia Redevelopment Authority, an organization which plans city slum clearance and development projects



JACK SPIELMACHER, president of the Automotive Wholesalers Association of Rhode Island and noted big game hunter and camera man is off to South Africa on an expedition

NEWSCE



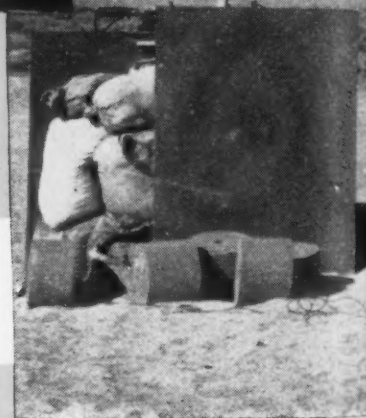
Looking for a "model in a haystack?"
Look no further, for here is Adele Mara,
showing the newest Hollywood style in
a two-way stretch suit, for the Summer
season.



"It's time to hit the road!", says clown F. E. Schmitz to Louise Smith, as the annual road tour of the Gainesville, Texas community circus gets under way. All performers are Gainesville residents.



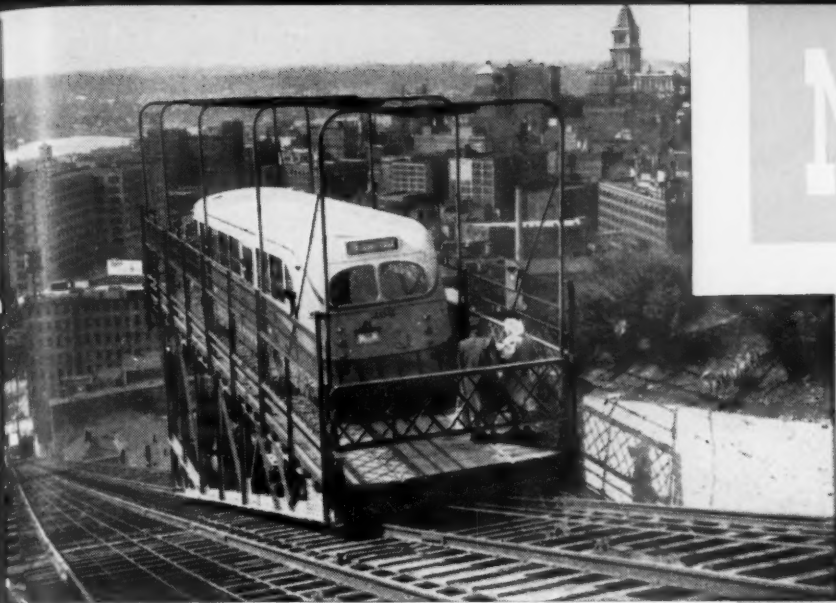
Heavy freight truck drivers stage a unique sit-down strike, protesting the state law fixing a 45,000 lbs. maximum weight for both truck and load. They contend that a limit of 100,000 lbs. is necessary for "pay-load."



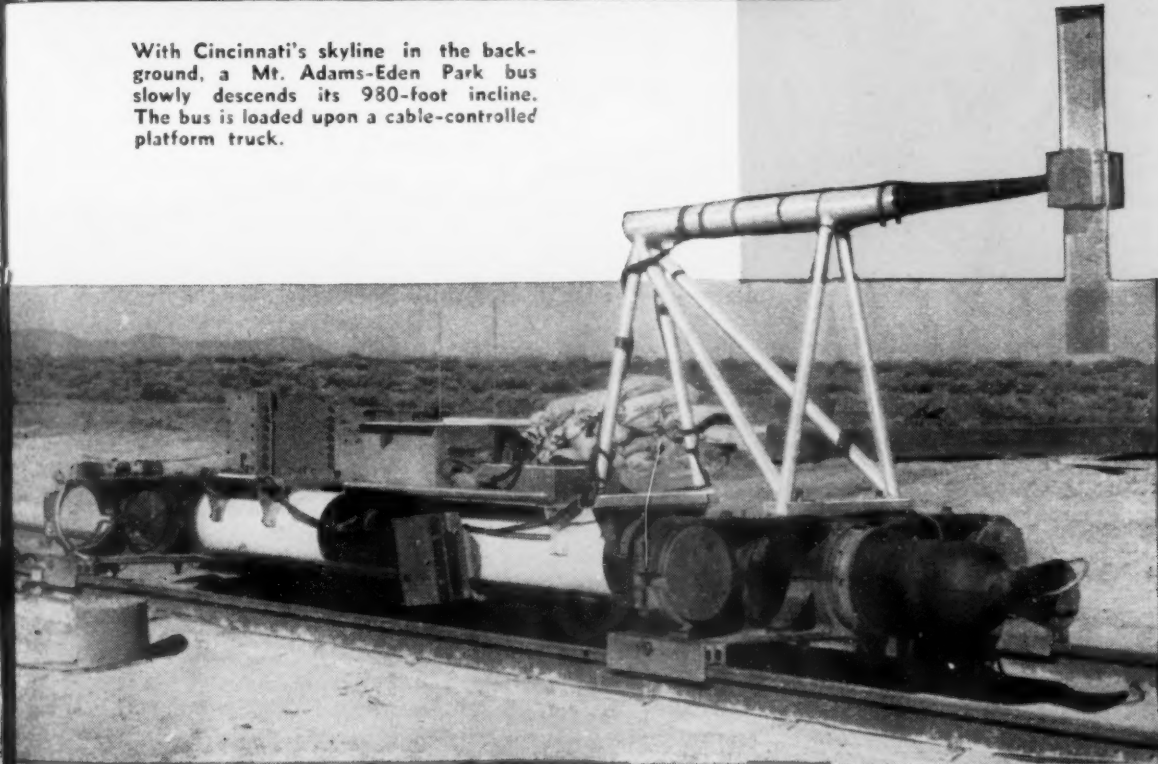
Visitors to the open-air display look at an Alfa Romeo racing car one of the world's most famous makes, made in Milan, Italy. The show of Milanese products was held by the workers.



NEWSCE



With Cincinnati's skyline in the background, a Mt. Adams-Eden Park bus slowly descends its 980-foot incline. The bus is loaded upon a cable-controlled platform truck.

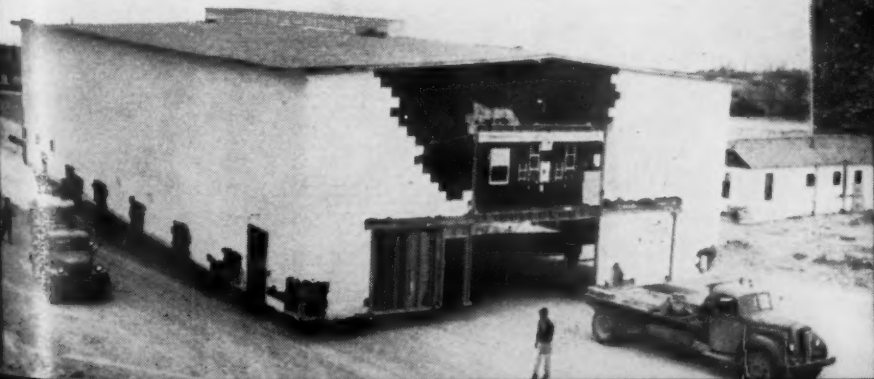


Faster than the speed of sound! This is the Northrop land vehicle, used for wind-model testing near Muroc Air Base in the California desert. Propelled by five rockets, the cart slides on slippers which grip the rails.

This 15,000 ton building was rolled to town on 24 B-29 nose wheels. It will be used as a municipal auditorium in Pecos, Texas, now that its days as a movie theater on a nearby airbase are over.



"Hey, look, Ma, I'm swimmin'!" Two hours old, and these ducklings are experts, after a lesson in a puddle on K Street, near Key Bridge, Wash., D. C. Water is Potomac overflow.



NEWSCENE



The Indianapolis 500 mile race will be covered for Motor Age this year by our technical editor, Jack Montgomery, shown here, center, with Tommy Milton, Indianapolis winner of 1921 and 1923, and Wilbur Shaw, three time winner and current president of the Indianapolis Speedway.

Farm Market for Cars Measured by Census Bureau

The tremendous replacement market for automobiles on the farms of the United States is measured in a report issued by the Census Bureau showing the distribution and age of automobiles on farms, as recorded in the 1945 Census of Agriculture.

The report shows that there were in 1945, 3,651,020 farms having 4,220,060 automobiles. Only 113,632 farms reported automobiles of 1942 and later models. Onl 968,062 farms had models of 1940 and later. Farms having models of 1935 to 1939 inclusive numbered 1,897,486. Models of 1931 to 1934 inclusive were on 433,816 farms and models of 1930 and older were on 341,656 farms.

Motor trucks in use on farms—1,518,854 of them on 1,311,808

farms—showed much the same age characteristics. Only 62,446 farms had motor trucks of 1942 and later models; and 328,670 farms had models of 1940 and later. Motor trucks of models of 1935 to 1939 inclusive were reported on 622,595 farms; models of 1931 to 1934 inclusive by 171,324 farms, and the motor truck models of 1930 and earlier, still in use 15 years later, were reported on 189,219 farms.

British Austin Sales In U. S. Pass 4,000 Mark

The output of British Austin automobiles has recently been stepped up from less than 1600 vehicles a week to the 2000 plus mark, and every effort is being made to reach a figure of 2400 weekly by the middle of summer, according to B. J. Hegarty, Director of The Austin Export

Corporation, who has just arrived in this country. The steel shortage is still serious, however, and remains the controlling factor in determining the output of cars and trucks, Hegarty said.

"We are now exporting two sedan models to the United States," he continued, "and in the short time since we introduced them, more than 4,000 have been sold here."

Kaiser-Frazer Offers Architectural Service

Establishment of a new dealer architectural service for Kaiser-Frazer Corporation's 4,000 dealers and distributors, was announced today by Fred R. Cooper, vice president in charge of sales.

The new department, headed by M. F. Harty, Detroit architect, will provide standard designs for urban, semi-urban and suburban dealer sales and service buildings which will be flexible to meet individual requirements, he said.

Sales and service department ratios of space are carefully analysed, Mr. Harty explained, and then worked into the plans so that best use of revenue-producing area is achieved.

Objective of the program, which is under the supervision of Norris Nash, sales promotion manager, is to aid dealers in providing best possible building facilities at lower costs, and to achieve national standardization of K-F architecture.

1948 Factory Sales From U. S. Motor Vehicle Plants*

| PASSENGER CARS | |
|----------------------|-----------|
| January | 305,081 |
| February | 274,847 |
| March | 349,998 |
| 3 Months | 929,926 |
| TRUCKS | |
| January | 99,200 |
| February | 107,054 |
| March | 140,606 |
| 3 Months | 346,860 |
| BUSES | |
| January | 1,370 |
| February | 1,090 |
| March | 1,409 |
| 3 Months | 3,869 |
| TOTAL MOTOR VEHICLES | |
| January | 405,651 |
| February | 382,991 |
| March | 492,013 |
| 3 Months | 1,280,655 |

*—Automobile Manufacturers Association.

1949 Studebaker Line Includes 12 Wheelbases

The 1949 line of trucks recently announced by The Studebaker Corp., includes 12 wheelbases and a variety of models and ratings. Additions to the line include—new $\frac{3}{4}$ -ton and two-ton models, while the $1\frac{1}{2}$ -ton series has added a 171-in. wheelbase chassis that takes either a 14- or 15-foot body.

The complete line comprises the following models: $\frac{1}{2}$ -tonner with a wheelbase of 112 in.; new $\frac{3}{4}$ -tonner with 122-in. wheelbase; one-ton model on 121- and 131-in. wheelbase; and the $1\frac{1}{2}$ -ton and new 2-ton models mounted on four wheelbases—131, 155, 171, and 195 in. Maximum GVW ratings range from 4600 to 16,000 lb.

In offering this new line of trucks, Studebaker has given special attention to increased driver comfort by unique design features in the cab and by improving the ride through the adoption of longer and more flexible springs. To improve accessibility for maintenance and inspection, engine accessories and other elements have been located more conveniently. All wiring and instruments are accessible from beneath the hood. The big hood opening provides ample room for reaching the engine from all angles.

HALF-TON—Powered by the Studebaker six-cylinder Econ-o-

CONTINUED ON PAGE 107

Chairman George Wansbrough and Managing Director C. Calcott Reilly of Jowett Cars Ltd. are in the United States on a business tour. They will drive the Jowett Javelin pictured above while over here. A primary purpose of the visit is to study the possibilities of marketing their car in this country, and at the same time they intend to study the latest American methods of automobile production and new machinery.



MAY, 1948

SLANTS

on the NEWS

by CHARLES M. KENYON

★ The number of motor vehicles registered in the United States has increased by about 10 per cent each year since the end of the war. According to figures released recently by the Public Roads Administration of the Federal Works Agency, a total of 37,402,230 automobiles and commercial vehicles were registered in 1947. This is a 10.2 per cent increase over 1946 registrations, or 3,456,413 vehicles. The 1946 total was 10.2 per cent above the 1945 figure. The passenger car increase, 1947 over 1941, formerly the peak year, is 4 per cent; and truck registration has increased 13.4 per cent since 1941.

★ It is an open secret in Detroit that the new Hudson 6 engine actually develops more horsepower than the current Hudson 8. The 8-cylinder engine is rated at 128 hp with a displacement of 254 cu. in. Official specifications list the 262.2 cu. in. 6-cylinder as developing only 121 hp, but it is reported to develop actually better than 130 hp. Hudson is being extremely modest in its horsepower claim for the 6 until they are ready to introduce their improved 8-cylinder which will outrate the current 6.

★ There is every reason to believe that new car prices will be raised again before the year is out. In spite of odd whirls and eddies here and there, the flood of car orders is still increasing in volume, and all companies are very certain that they cannot possibly fill even orders now on hand before the end of the year. In addition to the supply and demand situation, which in spite of New Deal economists has been the key to any price situation for several hundred years, the costs of production are continuing to rise. Labor is going to cost more, either in straight hourly increase or in the various increases of longer vacations, retirement funds, and so forth. There is no reason to believe that scarce materials will not continue scarce both because of the increased industrial market which affects all industries, and because of Government demands. Corporation profits are running high it is true, but any deliberate reduction of them is improbable, because corporations, like the individuals who work for them, not only feel the pinch of inflation but also are trying to set aside good American dollars against the claims of an uncertain future.

★ The light-weight car which Ford supposedly shelved last year is back in the news with an announcement by Henry Ford II that the car, with some changes, will be built in France and marketed by next October. The power plant will be the old Ford V-8 60 hp increased to 66 hp, but the body will be the new small one developed in Detroit.

NEWSCENE

New SAE Manual Covers Engine Cooling Systems

The recently-published Society of Automotive Engineers Manual, "Maintenance of Automotive Engine Cooling Systems," is designed to serve as a complete instruction manual for mechanics.

An outgrowth of a wartime report on motor vehicle maintenance prepared for the government by an SAE Transportation and Maintenance Committee group, this 100-page manual covers these five cooling system phases: (1) theory of its operation, (2) how to keep it functioning properly, (3) all possible troubles, (4) how to detect them and, (5) how to correct them.

One of its first chapters offers a new approach to construction, function, and operation of the cooling system. Practical rather than academic discussions give the student a sounder foundation for subsequent maintenance instructions. Another special fea-

ture covers in considerable detail the physical and chemical properties of water and antifreeze solutions and their influence on cooling system operation and maintenance.

NSPA Adds Sixty-Three New Members to Roster

Sixty-three new members have been added to the membership of the National Standard Parts Association in the first three months of 1948, according to Jack L. Wiggins, Executive Vice President of the association. While the majority of firms—both wholesaler and manufacturer—are located in the United States, eight are listed as associate overseas distributors.

A new associate classification of membership, unanimously voted at last year's annual convention, also made its first appearance in NSPA's membership roll—trade paper publishers. Chilton Co., publishers of Motor Age, is among these.

Ruark Announces Staff Appointment of Reed

Appointment of Howard Reed, formerly associated with his father in the management of Evanston Auto Supply Co., Evanston, Ill., and more recently with the Bendix Products Division of Bendix Aviation Corp., as a member of the Staff of Motor and Equipment Wholesalers Association has just been announced by B. W. Ruark, MEWA General Manager, as part of the Association's program of expanded services.



In his work with Motor and Equipment Wholesalers Association, Mr. Reed will give special attention to problems of wholesalers resulting from frequent and wide-spread changes of coercive selling and the fencing in of markets.

New Passenger Car Registrations*

Arranged by Makes in Descending Order According to the Two Months' 1948 Totals.

| Make | February | | January | | February | | Units | | Per Cent of Total | |
|------------|----------|---------|---------|---------|----------|--------|--------|------|-------------------|------|
| | 1948 | | 1948 | | 1947 | | 1948 | | 1947 | |
| | 1948 | 1947 | 1948 | 1947 | 1948 | 1947 | 1948 | 1947 | 1948 | 1947 |
| Chevrolet | 49,729 | 51,960 | 36,245 | 101,689 | 76,629 | 20.61 | 19.45 | | | |
| Ford | 39,982 | 42,499 | 36,202 | 82,481 | 69,580 | 16.71 | 17.66 | | | |
| Plymouth | 20,303 | 28,616 | 21,309 | 48,919 | 38,954 | 9.91 | 9.89 | | | |
| Buick | 18,744 | 17,042 | 15,889 | 35,786 | 30,667 | 7.25 | 7.78 | | | |
| Dodge | 13,604 | 19,075 | 12,596 | 32,679 | 25,105 | 6.62 | 6.37 | | | |
| Pontiac | 17,110 | 15,346 | 13,956 | 32,456 | 25,716 | 6.57 | 6.53 | | | |
| Oldsmobile | 11,832 | 11,383 | 12,312 | 23,215 | 25,195 | 4.70 | 6.39 | | | |
| Studebaker | 9,359 | 9,373 | 8,415 | 18,732 | 13,145 | 3.79 | 3.34 | | | |
| Mercury | 8,942 | 9,633 | 7,695 | 18,575 | 14,613 | 3.76 | 3.71 | | | |
| Nash | 7,887 | 8,114 | 6,653 | 16,001 | 14,554 | 3.24 | 3.69 | | | |
| Chrysler | 5,855 | 8,036 | 5,785 | 13,891 | 11,738 | 2.81 | 2.98 | | | |
| Kaiser | 6,319 | 7,063 | 2,531 | 13,382 | 4,798 | 2.71 | 1.22 | | | |
| Hudson | 6,497 | 6,271 | 6,802 | 12,768 | 12,951 | 2.59 | 3.29 | | | |
| DeSoto | 4,296 | 6,367 | 4,228 | 10,663 | 8,607 | 2.16 | 2.18 | | | |
| Frazer | 4,441 | 5,178 | 1,320 | 9,619 | 2,446 | 1.95 | .62 | | | |
| Packard | 3,326 | 3,892 | 2,804 | 7,218 | 5,487 | 1.46 | 1.39 | | | |
| Cadillac | 1,697 | 4,047 | 3,174 | 5,744 | 6,458 | 1.16 | 1.64 | | | |
| Willys | 1,766 | 1,792 | 1,336 | 3,558 | 2,582 | .72 | .68 | | | |
| Lincoln | 1,161 | 1,607 | 1,555 | 2,768 | 2,994 | .56 | .76 | | | |
| Crosley | 1,331 | 1,375 | 897 | 2,706 | 1,676 | .55 | .42 | | | |
| Austin | 424 | 234 | | 658 | | .13 | | | | |
| Playboy | 2 | | | 2 | | | | | | |
| All Others | 73 | 69 | 46 | 142 | 117 | .04 | .03 | | | |
| Total | 234,680 | 258,972 | 199,750 | 493,652 | 394,012 | 100.00 | 100.00 | | | |

*Data from R. L. Polk & Co., and includes all states with the exception of California.

Power-Pak Names Evans General Sales Manager

William W. Evans has been appointed general sales manager of Power-Pak Products, Inc., Buffalo, Anthony L. Mikulec, president, announced recently.

While no change in the Company's sales policy is planned, the sales department under Evans has been expanded to accommodate the needs of an increasing number of jobber outlets. Sales contacts with national accounts and manufacturers' representatives, formerly made by field sales executives, will now be under the sole direction and supervision of the general sales manager.

Southwest Automotive Show Attracts 16,557

Car dealer service personnel were prominent in attendance at the sixth annual Southwest Automotive Show at Dallas which attracted record breaking crowds from a dozen states at Dallas, Texas.

Total attendance based on turnstile count was not released. Registrations totaled 16,557, which included 4,561 garagemen and service station operators; 1,143 dealer service personnel; 493 fleet owners. There were 241 exhibitors occupying 405 booths covering 150,000 sq. ft. of floor space.

Dave Crockett, president of Dave Crockett Supply Co. Dallas, is president of the Southwest Automotive Show. The show committee was led by Frank J. Brogan, Dallas manufacturers representative. Other committee members included H. B. Braden, H. Roy Butts, T. C. Garrett, Ray



Left to right in photo: Frank J. Brogan, Dallas manufacturers representative and chairman of the Southwest Automotive show committee; E. M. Sheehan, Pittsburgh, Pa., president of the National Standard Parts Association; Mayor Jimmie Temple, Dallas; James E. Kilday, special assistant attorney general of U. S. in charge of transportation section of anti-trust division, Department of Justice; Dave Crockett, Dallas jobber and president of the Southwest Automotive Show corporation; and Frank K. Meyer, Houston, national president of Motor Equipment Wholesalers Association.

C. Ricke and A. S. Taylor.

Car factory zone offices in co-operation with the Southwest Automotive Show sponsored the mass attendance of dealer service personnel.

The show opened for a four-day run with James E. Kilday of San Antonio, special assistant U. S. attorney general, reading an address prepared for delivery by Attorney General Tom Clark.

Weatherhead Names Schwenk Assistant to President

O. G. Schwenk, General Production Manager of The Weatherhead Company, has been appointed Assistant to the President, A. J. Weatherhead, Jr., President announced recently. Schwenk, a native of New York City, graduated from Wesleyan University, studied Business Administration at Harvard Graduate School of Business Administration and received his Master's degree in Business Administration at Western Reserve University. He is a registered Certified Public Accountant in the State of Ohio. He is a member of American Management Association, Controllers Institute of America, American Institute of Accountants, and the National Association of Cost Accountants. Schwenk joined The Weatherhead Company in 1944 as Chief Industrial Engineer and was later appointed Controller and more recently General Production Manager.

Terry Promoted By American Brake Shoe Co.

Maynard B. Terry has been appointed General Sales Manager of the American Brakeblok Division of the American Brake Shoe Company, according to an announcement by W. A. Blume, Division President. Terry, formerly Manager of Equipment Sales, has served in various sales capacities since 1943.

Grote Appoints Schade Automotive Sales Head

Walter Grote, President of the Grote Manufacturing Company, Bellevue, Kentucky, has announced the appointment of Eric Schade as Sales Manager of the Automotive Division of the company.

The Grote Manufacturing Company manufactures signal flares, automotive lights, lamps and reflectors with Plexiglas lenses.

Warco Laboratories Buy Factory Building

Warwick Laboratories Co., Brooklyn, N. Y., announce the purchase of a steel and brick building at 334-42 Cleveland Street, which will provide 135,000 cubic feet of factory and shipping space. New equipment has been installed for increasing the output of Warco Brake Fluid and other automotive chemicals.

John F. D. Rohrbach, recently elected President of Raybestos-Manhattan, Inc., shakes hands with Sumner Simpson, President since formation of the Corporation and now Chairman of the Board.



CLEARING HOUSE

FOR SERVICEMEN'S QUERIES

• • • By JACK MONTGOMERY • Technical Editor



Automatic Advance Not Working Properly

I don't think my automatic spark is working right. I put in a new breaker plate assembly and a new diaphragm. If I take the line off at the carburetor and suck on it, it pulls the distributor plate. Will it work if I drill a hole and connect it below the carburetor in the manifold? I have a cross country carburetor on car.

Give me full details on automatic advance for 1937 Buick 40 Series. — Daniel Kessler, Orwin, Pa.

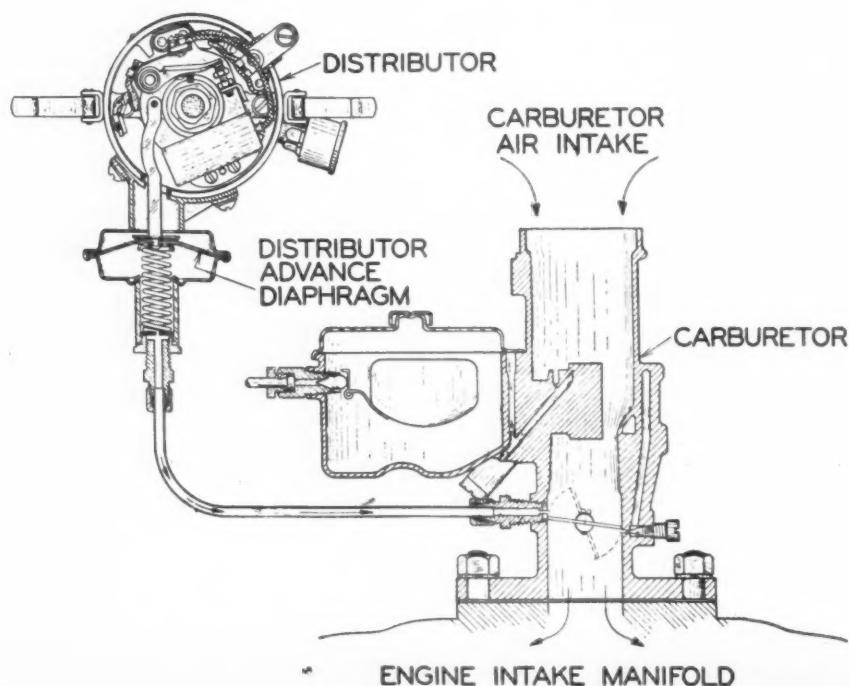
I would say your vacuum advance is working as it should be.

When you suck on the vacuum line it should advance the spark.

Most carburetor manufacturers provide a hole in the carburetor for the vacuum line and no attempt should be made to alter or change its location. The hole

location is at a point just above the throttle control valve when valve is closed in the idling position. The line is connected on the atmospheric side of the throttle valve, so that when the throttle is closed there is no vacuum applied to the vacuum chamber. The breaker plate is held in a retarded position by the spring which bears against the vacuum unit diaphragm.

Vacuum advance starts to work when throttle is opened equivalent to approximately 18 mph and continues to work until wide open. So you can readily see that changing the location of the carburetor fitting to the manifold would make the vacuum advance unit inoperative.



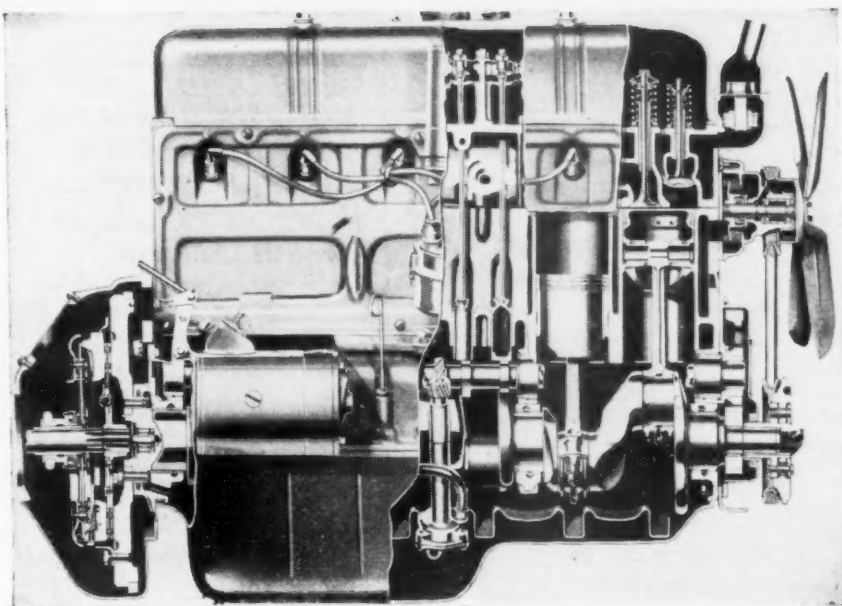
How Much To Shave Off Ford 6 Cylinder Head

I have a '41-6 cylinder Ford motor that has seen 21,000 miles of service in a car.

We would like to soup up this motor. How much do you recommend we have planed off of head to raise the compression? — Allison Harmon, 202 Kresson Rd., Haddonfield, N. J.

To increase the speed on your 1941, 6-cylinder Ford, I would suggest you plane about .060 in. from your cylinder head and also do a thorough valve job. I would also check the valve spring tension and valve guides. Be sure the ports are thoroughly cleaned.

CONTINUED ON PAGE 57



Chevrolet Knock Remains After Complete Overhaul

One of my customers has a very steady knock in his automobile engine, (1936) Chevrolet).

This knock is noticeable at all engine speeds when not under load. When engine is put under load the knock disappears.

We gave the car a complete overhaul job. Set all bearings and clearances to factory specifications, but the trouble remains the same.—John Van Der Weide,

John's Repair Shop, Sioux Center, Iowa.

Regarding the steady knock you are experiencing on your 1936 Chevrolet, I notice you have checked all the bearings and checked clearance, and so forth, but you do not mention anything about the timing gears.

I would suggest you remove the timing case cover and check the timing gear end-play, as a loose timing gear will cause a noise like the one mentioned.

Plymouth Motor Noise Not Stopped By Overhaul

I just recently overhauled a 1936 Plymouth, P 2 model. There is a clatter in the engine that sounds like the valve system, but that has been checked several times. The first set of pistons were worn quite a lot after the rebores. We put the second set in and the same noise started as soon as I started the motor. After this last set of pistons the motor doesn't use any oil. The cylinder walls of the engine were in good condition. I've checked the mains and the rods are all right.

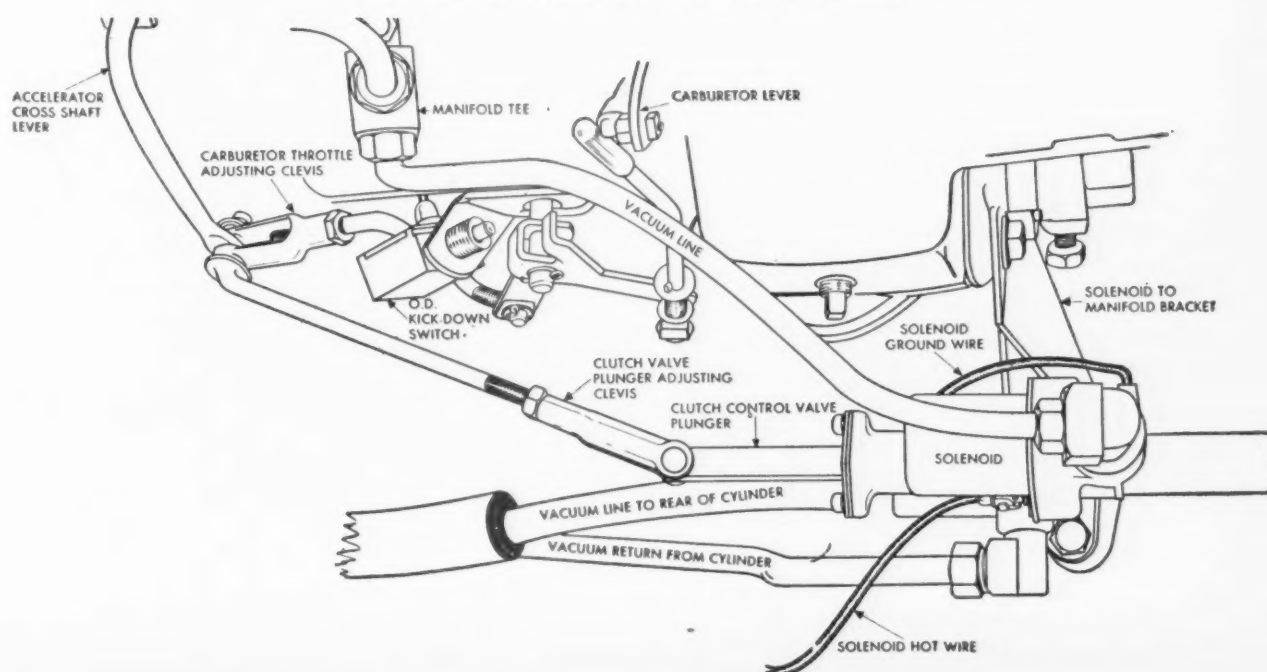
After the engine is warmed up, the clatter is the same as when it is cold. The noise subsides when you let up on the accelerator but when you come to a hill, it clatters.

When we overhauled it, we put new camshaft bearings in and the oil pressure dropped from 45 to 20 after the motor had run for an hour on cold days.

Regarding your 1936 Plymouth which you have just overhauled, I would say it is most unusual to have a noise such as you describe, after you rebored it and installed new pistons. I note you have installed new camshaft bearings but have only

CONTINUED ON PAGE 58

DIAGRAM OF STUDEBAKER OVERDRIVE CONTROL



checked the rods and mains. I would suggest you make an oil check to be absolutely sure your main and rod bearings are okey. Since your oil pressure drops from 45 to 20 lbs. in an hour it would indicate an excessive leak somewhere along the line. I would also suggest you examine your oil pump gears as they may be badly worn.

In regard to the knock, I would suggest you try shorting it out and pinning it down to one cylinder. The best method for doing this is to run the engine in high gear under load and have someone short each cylinder to see whether the noise disappears.

Cletrac Crawler Misses And Lopes at Idling

We have in our shop a Cletrac Model HG-42 crawler which has a miss in it and we have been unable to clear it up. On a hard pull it seems to run smooth, but at idling speed and other than pulling it lopes and misses irregularly. It will not idle like a car or truck engine will. We cleaned and checked the carburetor and manifolds, ground and adjusted all valves, installed new plugs with .025 in. clearance. Magneto was cleaned and checked and new condenser and points installed with .013 in. clearance. Will jump 1/8 in. gap from plug to screwdriver. Seems to be plenty hot. Good compression.

We notice that the spark assumes an advanced and permanent timing once the engine is under way and the impulse starter is cut out. Maybe this advanced position of the spark (normal) is what causes the motor miss and lope on idling speeds. Kindly advise us if this is normal, as it leaves us unsatisfied as we specialize in smooth running jobs. We have not heard a new one of these tractors run so are unable to judge this one on all counts. I was told by some one that these tractors don't idle smooth, and that it was normal for them to do this. —John Sporna, Escatawpa, Alabama.

On your Cletrac Model HG-42

crawler which has a miss when idling, I suggest that you retune the magneto and replace the coupling if it is worn. Set the magneto, crank the engine until No. 1 piston is coming up on compression and align the center punch on the flywheel with the center line of the timing plug hole. Loosen the drive coupling lock nut and turn the magneto shaft in a direction opposite magneto rotation until the distributor rotor points to position of No. 1 spark plug wire outlet. On this type magneto there is no centrifugal advance and spark advance will be permanent.

Installing 1941 Chevrolet Engine in 1937 Car

I have a 1937 Chevrolet and I have a 1941 High Torque block assembly that I would like to install.

From what information I can get I will have to get a pan for the High Torque but the heads are interchangeable except for the compression difference between the dome '37 type pistons and flat head pistons in the High Torque engine.

Would like to know how much would have to be taken off of the '37 head to be equal in compression to the '41, or if I could make it higher compression and take more off the head and not do any harm.

Any information you can give me or any places where I can get this information will be appreciated.

Could you tell me if there is any difference in flywheel flange between '37 or '41?—E. F. Hol-lun, Bucks Garage, 237 Roberts Ave., Santa Rosa, Cal.

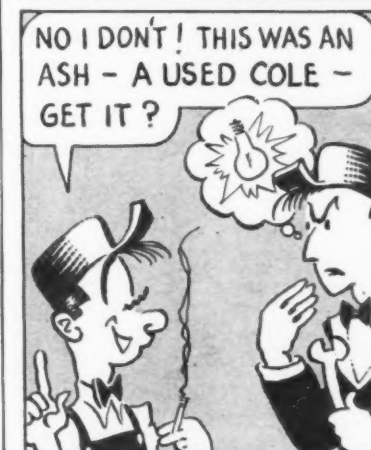
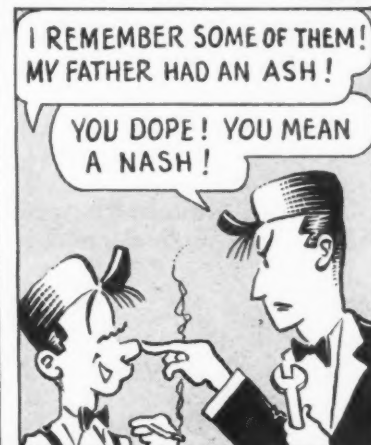
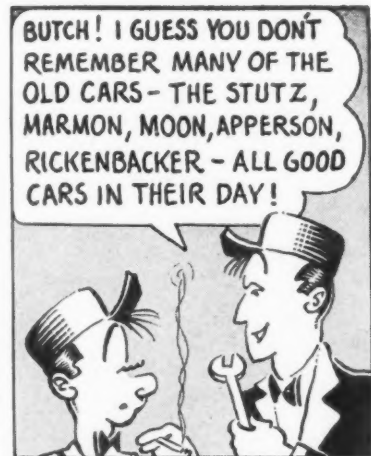
Installing a 1941 Chevrolet High Torque engine in a 1937 chassis can be accomplished by making very few changes.

If the old cylinder head is used plane about .060 in. off it to increase the compression ratio.

It will be necessary to purchase an oil pump, oil pan, and a flywheel and clutch assembly to complete the changeover.

CONTINUED ON PAGE 150

BUTCH



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CONTINUED ON PAGE 150

BUTCH

BUTCH! I GUESS YOU DON'T REMEMBER MANY OF THE OLD CARS—THE STUTZ, MARMON, MOON, APPERSON, RICKENBACKER—ALL GOOD CARS IN THEIR DAY!



I REMEMBER SOME OF THEM! MY FATHER HAD AN ASH!



YOU DOPE! YOU MEAN A NASH!



NO I DON'T! THIS WAS AN ASH—A USED COLE—GET IT?



I'LL WORK YOU DOWN TO AN ASH WHEN I GET YOU!

Current Engine and Tune-Up Specifications

| MAKE AND MODEL | Wheelbase (In.) | No. of Cylinders, Bore and Stroke | ENGINE | | | | TUNE-UP DATA | | | | VALVES | | | | IGNITION | | | | Cooling System Capacity, Refill (Qts.) | Rods Removed From Crankcase Capacity, Refill (Qts.) | Caster (Deg.) | Camber (Deg.) | Toe-In (In.) | King Pin Inclination (Deg.) |
|-----------------------------|-----------------|-----------------------------------|-------------|--------------------------------|--------------------------------------|-------------------|---|--------------------------|---------------|---------------|------------|----------|---------|---------|----------------------------|------------------------|-------------------------------------|----------------------|--|---|----------------|---------------|----------------------|-----------------------------|
| | | | Taxable Hp. | Pliston Displacement (Cu. In.) | Maximum Brake Hp. (with Bare Engine) | Compression Ratio | Compression Pressure at Cranking Speed (lbs.) | Spark Plug Make and Type | Rings | | Seat Angle | Inlet | | Exhaust | Operating Tappet Clearance | Inlet for Valve Timing | Deg. Inlet Opens Before or After TC | Timing Marks Located | Breaker Point Gap | Cam Angle (Deg.) | Spark Plug Gap | Spark Occurs | Timing Marks Located | Timing OTC |
| | | | | | | | | | No. and Width | No. and Width | Inlet | Inlet | Exhaust | | | | | | | | | | | |
| Buick Eight, 40 | 121 | 8-3 1/2"x4 1/2" | 30.6 | 248.1 | 110-3600 | 6.3 | 112 | AC-48 | 2-3/8 | 2-3/8 | 45 | 372.015H | .015H | .015H | .015 | 13BT | None | .015 | .025 | .025 | 4BT | Fly | None | 4 1/4" |
| Buick Eight, 50 | 124 | 8-3 1/2"x4 1/2" | 30.6 | 248.1 | 115-3600 | 6.6 | 114 | AC-48 | 2-3/8 | 2-3/8 | 45 | 372.015H | .015H | .015H | .015 | 13BT | None | .015 | .025 | .025 | 4BT | Fly | None | 4 1/4" |
| Buick Eight, 70 | 129 | 8-3 1/2"x4 1/2" | 37.8 | 320.2 | 144-3600 | 6.6 | 144 | AC-48 | 2-3/8 | 2-3/8 | 45 | 372.015H | .015H | .015H | .015 | 14BT | None | .015 | .025 | .025 | 6BT | Fly | None | 4 1/4" |
| Cadillac Eight, 61, 62, 60S | 136 1/4 | 8-3 1/2"x4 1/2" | 39.2 | 346.0 | 150-3400 | 7.2 | 117 | AC-104 | 2-3/8 | 2-3/8 | 45 | 372.015H | .015H | .015H | .015 | TC | TC | .015 | .030 | .030 | 5BT | VD | VD | 5 1/2" |
| Cadillac Eight, 75 | 136 1/4 | 8-3 1/2"x4 1/2" | 39.2 | 346.0 | 150-3400 | 7.2 | 117 | AC-104 | 2-3/8 | 2-3/8 | 45 | 372.015H | .015H | .015H | .015 | TC | TC | .015 | .030 | .030 | 5BT | VD | VD | 5 1/2" |
| Chevrolet Six, FJ-FK | 116 | 6-3 1/2"x3 3/4" | 29.4 | 216.5 | 90-3300 | 6.5 | | AC-M8 | 2-123 | 2-123 | 30 | 340.006H | .013H | .013H | .006H | 3BT | Fly | .021 | .040 | .040 | 5BT | Fly | Fly | 4 1/2"±30' |
| Chrysler Six, C-38 | 121 1/2 | 6-3 1/2"x4 1/2" | 28.3 | 250.6 | 114-3600 | 6.6 | 130 | AL-A5 | 2-3/8 | 2-3/8 | 45 | 341.008H | .010H | .010H | .014 | 12BT | VD | .020 | .025 | .025 | 2AT | VD | VD | 4 1/2" to 6 |
| Chrysler Eight, C-39 | 127 1/2 | 6-3 1/2"x4 1/2" | 33.8 | 323.5 | 135-3400 | 6.7 | 130 | AL-A5 | 2-3/8 | 2-3/8 | 45 | 341.008H | .010H | .010H | .014 | 12BT | VD | .018 | .025 | .025 | 2AT | VD | VD | 4 1/2" to 6 |
| Chrysler Eight, C-40 | 149 1/2 | 6-3 1/2"x4 1/2" | 33.8 | 323.5 | 135-3400 | 6.7 | 130 | AL-A5 | 2-3/8 | 2-3/8 | 45 | 341.008H | .010H | .010H | .014 | 12BT | VD | .018 | .025 | .025 | 2AT | VD | VD | 4 1/2" to 6 |
| Crosley Four, CC-48 | 80 | 4-2 1/2"x2 1/4" | 10.0 | 44.0 | 26.5-5400* | 7.5 | 130 | AL-A7 | 2-3/8 | 2-3/8 | 45 | 313.004C | .006C | .006C | .009 | 5BT | Fly | .020 | .046 | .025 | 12BT | Fly | Fly | 6 1/2" |
| Davis Four, D2 | 108 | 4-3 1/4"x4 | 16.9 | 133.0 | 46.5-3200 | 5.5 | | CH | 2-1 1/2 | 2-1 1/2 | 45 | 340.008H | .010H | .010H | .014 | 12BT | VD | .020 | .046 | .025 | TC | VD | VD | 4 1/2" to 6 |
| De Soto Six, S-11 | 121 1/2 | 6-3 1/2"x4 1/2" | 28.3 | 236.6 | 109-3600 | 6.6 | 135 | AL-A5 | 2-3/8 | 2-3/8 | 45 | 340.008H | .010H | .010H | .014 | 12BT | VD | .020 | .046 | .025 | TC | VD | VD | 4 1/2" to 6 |
| Dodge Six, D-24 | 119 1/2 | 6-3 1/2"x4 1/2" | 25.3 | 230.2 | 102-3600 | 6.7 | 130 | AL-A5 | 2-3/8 | 2-3/8 | 45 | 340.008H | .010H | .010H | .014 | 12BT | VD | .020 | .046 | .025 | 2AT | VD | VD | 4 1/2" to 6 |
| Ford Six, 87HA | 114 | 6-3 3/4"x4 1/2" | 26.1 | 226.0 | 90-3300 | 6.7 | 161 | CH-H10 | 2-092 | 2-186 | 45 | 310.014 | .014 | .014 | .015 | 5BT | TC | .015 | .036 | .025 | 1BT | None | None | 8 |
| Ford Eight, 88A | 114 | 6-3 3/4"x4 1/2" | 32.5 | 239.4 | 100-3800 | 6.7 | 115 | CH-H10 | 2-092 | 2-154 | 45 | 310.014 | .014 | .014 | .015 | TC | TC | .015 | .036 | .025 | 4BT | None | None | 8 |
| Ford Six, F485-F486 | 123 1/2 | 6-3 3/4"x4 1/2" | 26.3 | 226.2 | 100-3600 | 7.3 | 120 | AL-A5B | 2-093 | 2-154 | 30 | 341.014C | .014C | .014C | .014 | 10BT | VD | .022 | .038 | .032 | TC | VD | VD | 5 1/2" to 6 |
| Hudson Six, 481-482 | 123 1/2 | 6-3 3/4"x4 1/2" | 30.4 | 262.0 | 121-4000 | 6.5 | 119 | CH-J9 | 2-078 | 2-186 | 45 | 341.010H | .012H | .012H | .014 | 10BT | Fly | .020 | .038 | .032 | TC | Fly | Fly | 3 3/8" |
| Hudson Eight, 483-484 | 123 1/2 | 6-3 3/4"x4 1/2" | 28.8 | 254.0 | 128-4200 | 6.5 | 119 | CH-H10 | 2-093 | 2-186 | 45 | 341.005H | .008H | .008H | .014 | 10BT | Fly | .020 | .038 | .032 | TC | Fly | Fly | 3 3/8" |
| Kaiser Six, K481-K482 | 123 1/2 | 6-3 3/4"x4 1/2" | 26.3 | 226.2 | 100-3600 | 7.3 | 120 | AL-A5B | 2-093 | 2-154 | 30 | 341.014C | .014C | .014C | .014 | 10BT | Fly | .022 | .038 | .032 | TC | VD | VD | 5 1/2" to 6 |
| Lincoln Twelve, 875H | 125 | 12-2 7/8"x3 3/4" | 39.6 | 292.0 | 125-3600 | 7.2 | | CH-H4B | 2-093 | 2-186 | 45 | 310.014 | .014 | .014 | .015 | TC | TC | .015 | .036 | .027 | 2BT | None | None | 8 |
| Mercury Eight, 98M | 118 | 8-3 1/2"x4 1/2" | 32.5 | 239.4 | 100-3600 | 6.7 | 160 | CH-H10 | 2-091 | 2-154 | 45 | 311.011 | .015 | .015 | .015 | TC | TC | .015 | .036 | .026 | 4BT | None | None | 7 |
| Nash Six, 4840 | 112 | 6-3 1/2"x4 1/2" | 23.4 | 172.6 | 82-3800 | 7.0 | 120 | AL-A5 | 2-093 | 2-186 | 44 | 341.015 | .015 | .015 | .019 | 6BT | None | .020 | .025 | .025 | TC | VD | VD | 4 1/2" to 6 |
| Nash Six, 4860 | 121 | 6-3 1/2"x4 1/2" | 27.3 | 234.8 | 112-3400 | 7.0 | 125 | AL-A4 | 2-093 | 2-154 | 44 | 372.015 | .018 | .018 | .022 | 4 1/2BT | None | .020 | .025 | .025 | TC | VD | VD | 4 1/2" to 6 |
| Oldsmobile Six, 66, 76 | 119 | 6-3 1/2"x4 1/2" | 29.4 | 238.1 | 100-3400 | 6.5 | 169 | AC-45 | 2-3/8 | 2-3/8 | 30 | 342.008H | .011H | .011H | .012 | 5BT | None | .020 | .035 | .030 | TC | Fly | Fly | 4 1/2" to 6 |
| Oldsmobile Eight, 68, 78 | 125 | 8-3 1/2"x4 1/2" | 33.8 | 257.1 | 110-3600 | 6.5 | 165 | AC-45 | 2-3/8 | 2-3/8 | 30 | 342.008H | .011H | .011H | .012 | TC | None | .015 | .031 | .030 | 2BT | Fly | Fly | 4 1/2" to 6 |
| Oldsmobile Futuramic 98 | 125 | 8-3 1/2"x4 1/2" | 33.8 | 257.1 | 115-3600 | 7.0 | 182 | AC-45 | 2-3/8 | 2-3/8 | 30 | 342.008H | .011H | .011H | .012 | TC | None | .015 | .031 | .030 | 2BT | Fly | Fly | 4 1/2" to 6 |
| Packard Eight & Del. 8 | 120 | 8-3 1/2"x4 1/2" | 39.2 | 288.0 | 130-3600 | 7.0 | | (k) | 2-3/8 | 2-3/8 | 30 | 341.007H | .010H | .010H | .012 | 10BT | None | .017 | .027 | .028 | 6BT | None | None | 8 1/2" |
| Packard Super Eight | 120 | 8-3 1/2"x4 1/2" | 39.2 | 327.0 | 145-3600 | 7.0 | | (k) | 2-3/8 | 2-3/8 | 30 | 341.007H | .010H | .010H | .012 | 10BT | None | .017 | .027 | .028 | 6BT | None | None | 8 1/2" |
| Packard Custom Eight | 127 | 8-3 1/2"x4 1/2" | 39.2 | 356.0 | 160-3600 | 7.0 | | (k) | 2-3/8 | 2-3/8 | 30 | 341.007H | .010H | .010H | .012 | 4BT | None | .017 | .027 | .028 | 6BT | None | None | 8 1/2" |
| Playboy Four, A-48 | 90 | 4-2 1/2"x3 1/2" | 13.2 | 91.0 | 40-3600 | 7.5 | | CH-C8 | 2-093 | 2-149 | 30 | 314.012H | .012H | .012H | .014 | TC | VD | .020 | .036 1/2 | .025 | TC | Fly | Fly | 12" |
| Plymouth Six, P-15 | 117 | 6-3 1/2"x4 1/2" | 25.3 | 217.8 | 95-3600 | 6.6 | 120 | AL-5 | 2-3/8 | 2-3/8 | 45 | 340.008H | .010H | .010H | .014 | 12BT | VD | .020 | .036 1/2 | .025 | TC | VD | VD | 4 1/2" to 6 |
| Pontiac Six, 25, 28 | (f) | 6-3 1/2"x4 1/2" | 30.4 | 239.2 | 93-3400 | 6.5 | 160 | AC-45 | 2-3/8 | 2-3/8 | 30 | 312.012H | .012H | .012H | .012 | 5BT | CC | .020 | .037 | .025 | 4BT | Fly | Fly | 5 |
| Pontiac Eight, 27, 28 | (f) | 8-3 1/2"x4 1/2" | 33.8 | 248.9 | 107-3700 | 6.5 | 158 | AC-45 | 2-3/8 | 2-3/8 | 30 | 312.012H | .012H | .012H | .012 | 5BT | CC | .015 | .031 | .025 | 4BT | Fly | Fly | 5 |
| Studebaker Six, 7Q | 112 | 6-3 3/4" | 21.6 | 169.6 | 80-4000 | 6.5 | 105 | CH-J7 | 2-3/8 | 2-3/8 | 45 | 312.016C | .016C | .016C | .020 | 15BT | FVD | .020 | .038 | .025 | 2BT | FVD | FVD | 5 1/2" |
| Studebaker Six, 15A | 119 | 6-3 1/2"x4 1/2" | 26.3 | 226.2 | 94-3600 | 6.5 | 105 | CH-J7 | 2-3/8 | 2-3/8 | 45 | 312.016C | .016C | .016C | .020 | 15BT | FVD | .020 | .038 | .025 | 2BT | FVD | FVD | 5 1/2" |
| Willlys Six, 663 | 104 | 6-3 3/8"x3 1/2" | 21.6 | 148.5 | 72-4000 | 6.4 | 110 | AL-A7-F | 2-3/8 | 2-3/8 | 45 | 340.014 | .014 | .014 | .014 | 5BT | None | .020 | .034 1/2 | .030 | TC | TC | TC | 8 |

*—With Standard Accessories
 ±—Plus or Minus 1/2°
 —At 1/2° Camber
 —Depression in Camshaft Gear
 —Do not recommend using a dwell meter for checking point opening

(a)—Models 61 and 62—126 in., Model 60S—133 in.
 (b)—Upper Ring 1 1/2 in., Lower Ring .1890 in.
 (c)—Models 25 and 27—119 in., Models 26 and 28—122 in.

(g)—Top Ring 1 1/2 in., Middle Ring 1 1/2 in.
 (h)—Auto-Lite P4 or AC104 or Champion 4A
 (i)—No. 1—093; No. 2—1235
 (r)—Upper 3/8; Lower 5/8

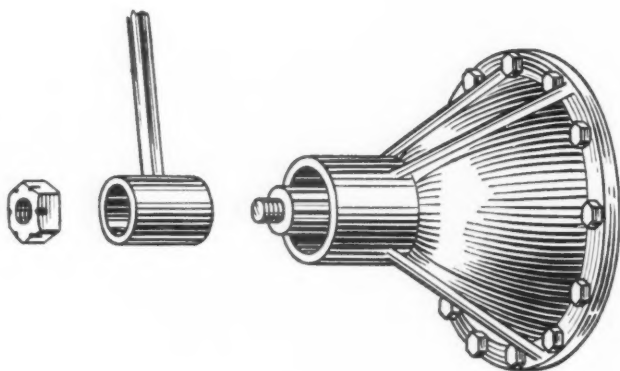
ABBREVIATIONS
 BT—Before Top Center
 C—Cold
 CC—Crankshaft and Camshaft Sprockets
 CH—Champion Spark Plug Co.
 DH—Distributor Housing
 FVD—Flywheel
 FVD—Flywheel Vibration Damper
 N—Negative
 TC—Top Center
 TG—Timing Gears
 VD—Vibration Damper

SHOP KINKS

\$★
25



**FOR THE BEST KINK
PUBLISHED EACH MONTH**



We have a handy tool which we use in place of a pinion flange when we are making pinion bearing adjustments on Plymouth, Dodge and Chrysler cars. This tool makes it unnecessary to remove and replace the tight fitting flange several times.

The tool is made from pieces of scrap found around any shop. It is a piece of $1\frac{1}{4}$ inch pipe $1\frac{7}{8}$ inches long with a handle welded to it as shown above.

The sketch shows how it is used as well as how it is made.—*Earl Stidworthy, Dodge and Plymouth Dealer, Warwick, New York.*

Tool For Removing Chevrolet Frost Plugs

For removing old frost plugs on late model Chevrolets, drill or punch hole $\frac{1}{4}$ in. to $\frac{5}{16}$ in. in the frost plugs. Then take a lag screw $\frac{3}{8}$ in. x 3 in. to screw in the frost plugs until they are tight.

Take a piece of strap iron with $\frac{3}{8}$ in. hole in end with 90 degree bend $\frac{1}{2}$ in. beyond the hole. Cut the top piece $4\frac{1}{2}$ in. long and drill $\frac{3}{4}$ in. hole near the end. Insert a jack handle to use as a lever, butting it against the manifold. Tap the top of the jack handle with 3 lb. hammer.

We have used this method often and find it quick and efficient.—*Charles Griffin, 3401 Belt Line Hwy., Robbinsdale, Minn.*

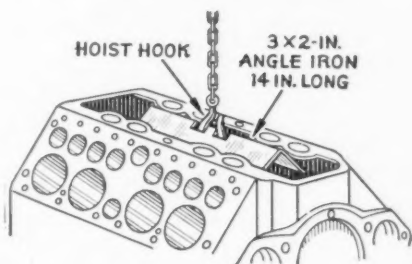
Emergency Repair for Broken Contact Points

I am enclosing a trick that has saved me from walking several times. If the fibre breaks off the contact points in the distributor, take them out and wind a few turns of small twine around where the fibre was. Tie it, then rub a little grease on it. It will open the points and run several hundred miles, or until your car gets a set of points.—*E. B. Grove, Max Meadows, Va.*



Angle Iron Makes a Handy Ford Engine Lift

Here's an easy way to lift a Ford engine. Remove intake manifold, drop angle iron edge-ways down into the valve chamber, hitch the chain fall to the angle iron as shown in the sketch, slide forward or backward to balance the engine; lift



the engine up and out or replace in the chassis. This device is absolutely safe, saves the time and effort of putting a chain or cable around motor, and is easily made and always ready. I use one at my garage and find it to be very successful. — *Bradley Gordon, Moline Garage, Moline, Kansas.*

Sticking Gaskets in Place With Masking Tape

Some gaskets are very tough to hold in position while the pan, water jacket plate, and so forth, is being installed. We've found

that easiest way to do this is with a roll of scotch tape or masking tape. Simply apply the gasket goo to the gasket. Then, holding it in position, secure it with short strips of tape. Be sure that you clean the grease and dirt off the metal before attempting to secure the tape to it. — *Joseph Matto, B & W Service Garage, 150 Broadway, Newark, N. J.*

Hack Saw Blade Makes Useful Door Handle Tool

Here is a very useful tool for removing retaining pins (horse-shoe clips) from door inside handles.

It is made easily from a broken hack saw blade n a grinding wheel, which will shape the tool in much less time than it would take to try to get the pin out without the tool, and it works fine. — *Charles Meyer, 72 St. Pauls Ave., Jersey City, N. J.*

Hone Cylinders on V-Type Engines From Underneath

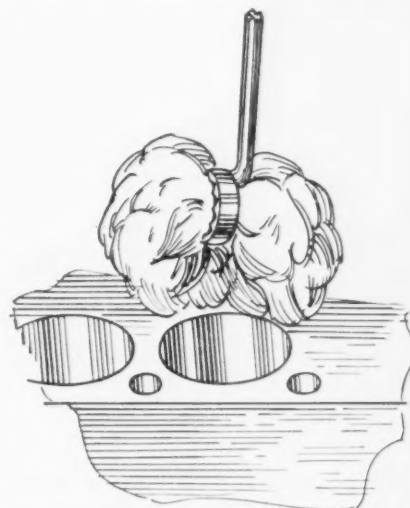
On all ring jobs where it is necessary to hone cylinders in order to remove glaze on V-8 and V-12 engines and where it is impossible to do the job because of obstruction of front fenders, it is possible to hone all cylinders by inserting the hone upside

Surer than the races, steadier than hitting the jackpot. The faster you write 'em, the richer you get. 25 bucks for one lucky fellow! So grab your pencil and spike at least a fin. Send along your idea—write it or draw it, anyway that we can understand it—some short cut to make a job easier or faster, some special tool you can't buy, some kink of your own. Of course, we won't accept any printed by any other publication.

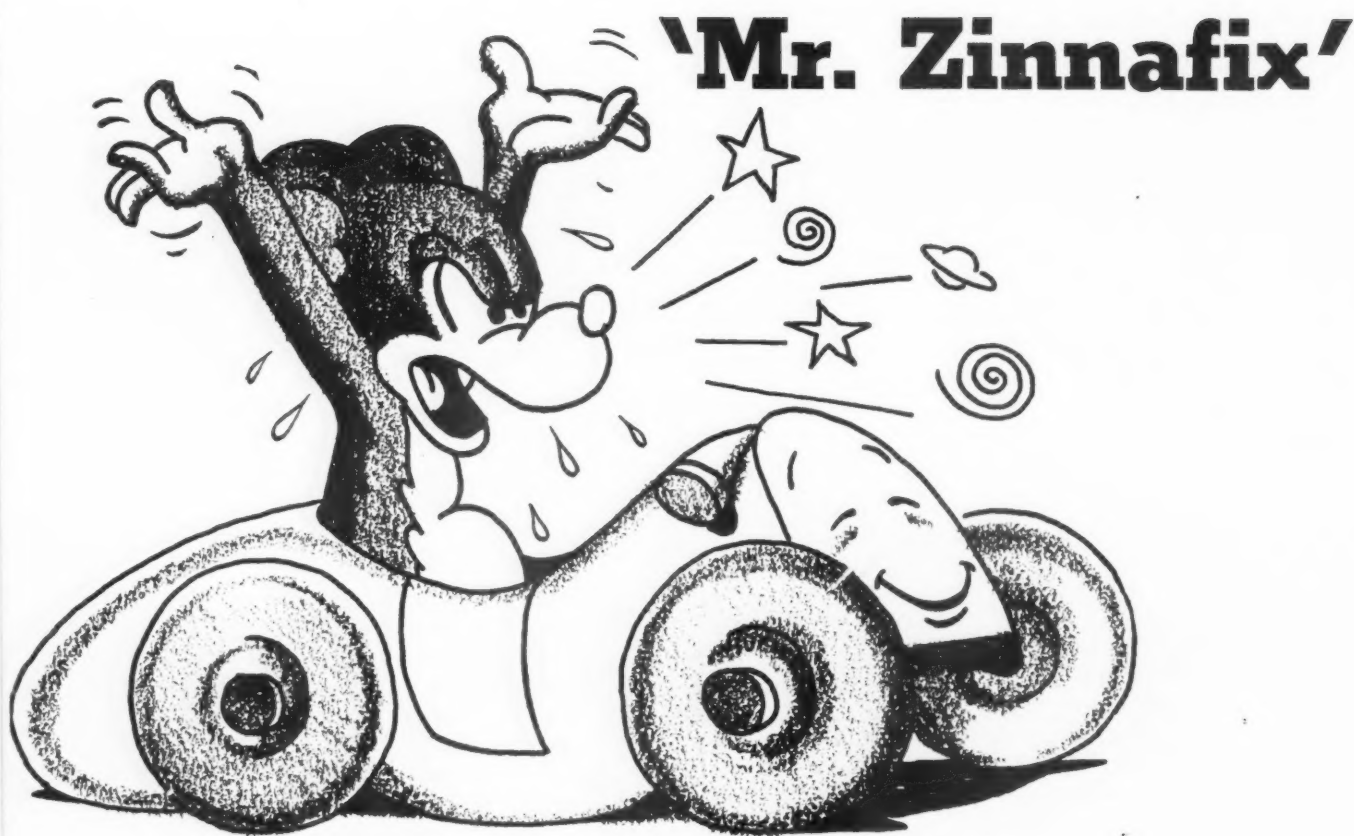
down into the bore and by using a long sectional extension. By hoisting the car high enough, the entire job can be done from underneath the car. — *William Drohomer, 808 Oak St., Santa Ana, Calif.*

Box Wrench Ram Rod Cleans Small Bores

Cylinders on small size bores, where one's hand is too large to be inserted in the cylinder, can



be cleaned more easily by inserting three shop towels or a bunch of rags into a large size box wrench. *William Drohomer, 808 Oak Street, Santa Ana, California.*



Over 30 years of dependable service

JOLTING JALOPY?

Corrugated Carl has a sorry little surrey... Life for him is just a bunch of bumps. Neither he or the car are crooked but they can't go straight. They could, tho, if he'd just let his mechanic work a good wheel alignment into his wagon. He'd stop being a potential accident then with better control of his crate ... to say nothing of the more comfortable cruises he'd enjoy.

Better see YOUR mechanic for a wheel alignment tomorrow!

Where you and your car get personal service

CARLSON & SIMPSON

Drive in at
STATE & ASH
 Telephone: F. 7311



V. E. Westerlund, president of
 Carlson & Simpson, Inc.

A San Diego service garage, Carlson and Simpson, Inc., recently decided to achieve satisfactory advertising results through the use of small spot ads in the local newspapers. Rather than going at the problem haphazardly, they worked with an advertising agency and together came up with the solution given here. The problem was difficult, as it is with most dealer agency or repair shop advertising, and the solution is readily adaptable to the problems of other

Shows how ADVERTISING Pays



Comic character coined by San Diego service garage builds good will, and stimulates other repair shop business



Carlson & Simpson, Inc. at the corner of State and Ash streets in San Diego . . . busy, progressive service garage.

shops in any section of the country.

The thirty-year-old service garage was faced with an advertising problem that was threefold: first of all, the comparatively small budget-wise ads had to be easily readable and quickly distinguishable because of the competition of larger ads that crowd the daily San Diego newspapers; secondly, the ads had to promote their retail service and part sales without detracting from their wholesale parts business; and thirdly, the ads had to be an effective interpretation of the friendly service and experienced assis-

tance that was traditional at Carlson and Simpson, Inc.

A cartoon style of ad featuring animated illustrations plus spirited, conversational type copy was selected to carry the lead of making the ad outstanding in comparison with other advertising as well as portraying friendliness. V. E. Westerlund, president of Carlson and Simpson, Inc. decided to build the ad series around the antics of an automotive minded bear. The bear—created especially for the series—was to be an impartial character, carrying out the copy theme with comic exaggerations. With few exceptions, the copy was to have “your” mechanic do the necessary work, rather than

CONTINUED ON PAGE 92

NEW PRODUCTS

M-1 Continental Makes Utility Power Tool

Continental Motors' Detroit plant is now in production on their "Multi-Tool", a new many-purpose power tool for use in shops, on the farm, on construction, or around the home. The unit is described as weighing about 50 pounds. With its utility shaft, Multi-Tool is said to bore holes in wood or metal, at the low speeds required by large wood augers, or the high speeds suited to small twist drills, and can be used to sand, grind, scratch, buff, or polish. It is said to operate at any speed from 600 to 2600 rpm. With a



1½ hp capacity, the manufacturer recommends it for use with sprayers, compressors, generators, and such shop tools as drill-presses, lathes, sanders, and buffers.

M-2 Murray Announces Battery Hold Down

The Murray Corporation of Towson, Md., announces a new Universal Battery Hold Down. This product is designed to fit



all batteries in groups 1 and 2. Four lugs are said to assure rigidity, while two movable clamping clips can be placed in various positions to accommodate a hold down bolt. According to the manufacturer, these hold downs are sealed against acid-fume corrosion by the application of "Fume-A-Seal".

M-3 McCaskey Offers Special Cash Register

The McCaskey Register Company, Alliance, Ohio, is offering a multi-purpose cash register particularly designed for use in service stations and repair shops. With index keys provided to fill the particular needs of the repair shop or service station, this register is said to re-

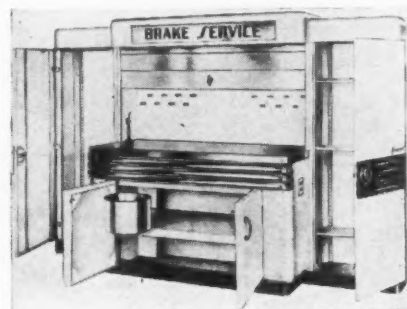
cord gallonage over any given period of time. By incorporating a "one-writing" charge account control with the cash register system, accounts for each department can, according to the manufacturer, be kept separate, and statement of financial condition can be obtained simply, thus eliminating guesswork.

M-4 Aircraft-Marine Has Wire Insulating Coating

Stripping of electrical wires coated with enamel or similar wire insulating coating is speeded by the use of "Formula 21", according to the manufacturer, Aircraft-Marine Products, Inc., Harrisburg, Pa. Use is said to be simple: merely dip wire in liquid and wipe off with rag or blow off with compressed air. No scraping, tools, or special cleaning is required. This product is available in 2 ounce bottles, one and five gallon cans.

M-5 Steel Work Table Made By Gray Company

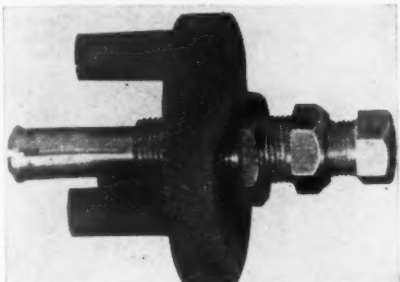
A 12-gage steel work table reinforced with wood, a built-in parts washer, an electric outlet for power tools and trouble light, a space for an air hose reel, and brackets for necessary tools are included in the service merchandiser manufactured by the Gray Company, Minneapolis 13, Minn. Finished in white enamel, this mechanic's work center is designed to save time and unnecessary steps by having a place for everything. There are two side cabinets, one for extra tools, another for fender covers, wiping



rag, creepers, etc. The unit is 108 in. long, 27 in. deep, and 68 in. high. Fluorescent lighting is an additional feature of the new merchandiser.

M-6 Cam Tool Offers Improved Bearing Remover

An improved model of the Thompson Bearing Remover is announced by Cam Tool Co., Oakland, Cal. The improvement eliminates rotation of the extrac-



tion collet, producing a straight pull and preventing the collet from being twisted off in case it should bind on a bushing, button die, or Hyatt type bearing. A special application of this bearing remover is to the clutch pilot bearings of Chevrolet and Buick automobiles which many mechanics find difficult to remove.

M-7 Sunlite "Breez-Bye" Prevents Drafts on Driver

The Sunlite Mfg. Co., Milwaukee, Wis., offers the Breez-Bye Wind Rejector, a unit consisting of two plastic shields mounted in aluminum frames. It attaches to the back of the front seat, and the forward pitch is said to prevent draft on the driver and passengers. When not in use the unit folds against the back of the seat. Breez-Byes are made in two models: for shell back seats and for tubular frame seats.

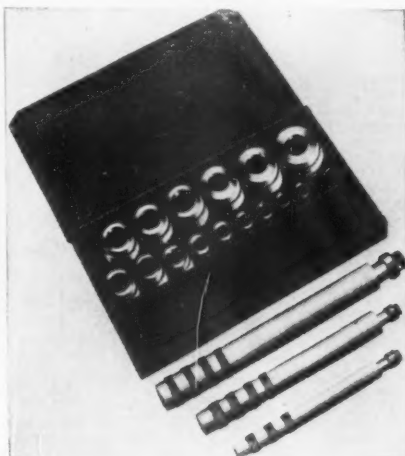
M-8 Ray-Man V-Belt Added to Manhattan Line

The addition of the newly developed Ray-Man V-Belt to its line of industrial rubber products has been announced by Manhattan Rubber Division, Raybestos-Manhattan, Inc., Passaic, N. J. The new Ray-Man V-Belt was developed by Manhattan's engineers to meet the need for a belt possessing features particularly applicable to

tough rugged drives. According to the manufacturer, the engineered strength members have been especially designed for this type of service, and added features of oil, heat and static resistance provide a belt with qualities for unusual service requirements.

M-9 Bonney Bushing Driver Set Now On Market

A new bushing driver set, packaged in a red enamel tool box is announced by the Bonney Forge and Tool Works, Allentown, Pa. The set consists of three different size handles and 17 bushings in sizes that will drive all passenger car and many



truck and tractor bushings. The tools are made of alloy steel, hardened and tempered, and have a plated finish.

M-10 Hydraulic Jack by Duff-Norton Announced

For lifting jobs in close quarters, the "Lo-Hite" Hydraulic Jack is announced by the Duff-Norton Manufacturing Com-



pany, Pittsburgh, Pa. This jack is fitted with an independent pump which is connected to the jacking mechanism by a length of rubber tubing. The pump can be operated from the ground or from any convenient plane, while the jack itself is spotted in close, confined positions.

M-11 New Creeper Has Tilting Back Rest

Repair jobs on large trucks and similar equipment can be facilitated by the use of a new creeper with a tilting backrest, according to the manufacturer, the Tool Chest Dolly Mfg. Co., Los Angeles 13, Calif. Constructed of heavy gage sheet aluminum with an oak framework, the Tilt Back Creeper is adjustable from 15 to 45 degrees.

MAIL THIS COUPON:

For further information on any of the products mentioned in Motor Age write the code number of the product in the space provided below. Don't forget your name and address.

Frank P. Tighe
MOTOR AGE
Chestnut & 56th Sts., Philadelphia 39, Pa.

Code Number of New Products.....

.....

Your Name..... Your Title.....

Your Company.....


Address..... (STREET & NO.) (CITY) (ZONE) (STATE).....

Current Passenger Car Price, Weight and Body Table

Following are prices at factory for cars with standard equipment as of April 1. State or local taxes, transportation and finance charges and optional equipment are extra.

| BODY, MAKE AND MODEL | List Price at Factory without Federal Taxes | Federal Taxes and Handling Charges | Delivered Price at Factory including Federal Taxes | Shipping Weight | BODY, MAKE AND MODEL | List Price at Factory without Federal Taxes | Federal Taxes and Handling Charges | Delivered Price at Factory including Federal Taxes | Shipping Weight | BODY, MAKE AND MODEL | List Price at Factory without Federal Taxes | Federal Taxes and Handling Charges | Delivered Price at Factory including Federal Taxes | Shipping Weight |
|------------------------|---|------------------------------------|--|-----------------|--------------------------|---|------------------------------------|--|-----------------|-------------------------------|---|------------------------------------|--|-----------------|
| BUICK | | | | | DODGE (Continued) | | | | | OLDSMOBILE (Continued) | | | | |
| Series 40 | | | | | Town Sedan | \$1577 | \$ 87 | \$1664 | 3331 | Station Wagon | \$2360 | \$154 | \$2514 | |
| Sedanet, 2nd | \$1497 | \$114 | \$1611 | 3670 | Convertible Coupe | 1812 | 99 | 1911 | 3461 | Series 76-Eight | 1530 | 113 | 1643 | 3545 |
| Sedan, 4d. | 1556 | 117 | 1673 | 3720 | Sedan, 8p. | 1861 | 103 | 1964 | 3757 | Club Sedan | 1600 | 117 | 1717 | 3825 |
| Series 50 | | | | | FORD | | | | | Sedan, 4d. | 1670 | 119 | 1789 | 3590 |
| Sedanet, 2d. | 1708 | 135 | 1843 | 3795 | DeLuxe Six | | | | | Club Sedan, DeLuxe | 1740 | 123 | 1863 | 3665 |
| Sedan, 4d. | 1790 | 139 | 1929 | 3910 | Coupe, 2d. | 1078 | 76 | 1154 | 3033 | Series 98-Eight | 1790 | 130 | 1920 | |
| Convertible Coupe, 2d. | 2175 | 158 | 2333 | 4050 | Tudor | 1133 | 79 | 1212 | 3183 | Club Sedan | 1860 | 133 | 1993 | |
| Estate Wagon | 2622 | 183 | 2805 | 4170 | Fordor | 1188 | 82 | 1270 | 3213 | Sedan, 4d. | 1890 | 134 | 2024 | 3685 |
| Series 70 | | | | | Super DeLuxe Six | | | | | Club Sedan, DeLuxe | 1960 | 138 | 2098 | 3745 |
| Sedanet, 2d. | 1968 | 163 | 2131 | 4095 | Coupe | 1170 | 81 | 1251 | 3033 | Conv. Coupe, DeLuxe | 2310 | 156 | 2466 | 4035 |
| Sedan, 4d. | 2065 | 167 | 2232 | 4190 | Tudor | 1225 | 84 | 1309 | 3183 | PACKARD—1948 | | | | |
| Convertible Coupe | 2463 | 188 | 2651 | 4345 | Sedan Coupe | 1245 | 85 | 1330 | 3133 | Eight-2201 | 1998 | 127 | 2125 | 3750 |
| Estate Wagon | 3030 | 219 | 3249 | 4445 | Fordor | 1285 | 87 | 1372 | 3233 | Club Sedan | 2022 | 128 | 2150 | 3820 |
| CADILLAC | | | | | Deluxe Eight | 1150 | 80 | 1230 | 3066 | Touring Sedan | 3161 | 189 | 3350 | 4080 |
| Series 61 | | | | | Coupe | 1205 | 83 | 1288 | 3216 | Station Sedan | | | | |
| Club Coupe, 2d. | | | 2511 | 4080 | Tudor | 1260 | 86 | 1346 | 3246 | DeLuxe Eight-2211 | 2212 | 138 | 2350 | 3770 |
| Touring Sedan, 4d. | | | 2647 | 4165 | Fordor | | | | | Club Sedan | 2235 | 140 | 2375 | 3850 |
| Series 62 | | | | | Super DeLuxe-Eight | 1245 | 85 | 1330 | 3066 | Touring Sedan | | | | |
| Club Coupe, 2d. | | | 2719 | 4145 | Coupe | 1295 | 87 | 1382 | 3216 | Super Eight-2202 | 2505 | 160 | 2665 | 3810 |
| Convertible Coupe, 2d. | | | 3174 | 4455 | Tudor | 1320 | 89 | 1409 | 3166 | Club Sedan | 2529 | 161 | 2690 | 3880 |
| Touring Sedan, 4d. | | | 2781 | 4235 | Sedan Coupe | 1350 | 90 | 1440 | 3266 | Touring Sedan | 2990 | 185 | 3175 | 4025 |
| Series 60-Special | | | | | Fordor | 1635 | 105 | 1740 | 3266 | Conv. Victoria Coupe | | | | |
| Touring Sedan, 4d. | | | 3506 | 4370 | Conv. Club Coupe | 1855 | 117 | 1972 | 3520 | Super Eight-2222 | 3109 | 191 | 3300 | |
| Series 75 | | | | | Station Wagon | 2150 | 132 | 2282 | 3366 | Touring Sedan, 7p. | 3252 | 198 | 3450 | |
| Business Sedan, 9p. | | | 4368 | 4790 | Sportsman | | | | | Limousine, 7p. | 3442 | 208 | 3650 | |
| Touring Sedan, 4d. | | | 4471 | 4875 | FRAZER | | | | | Sedan, DeLuxe, 7p. | 3584 | 216 | 3800 | |
| Business Imperial, 9p. | | | 4560 | 4890 | Sedan, 4d. | 2152 | 212 | 2364 | 3375 | Limousine, DeLuxe, 7p. | | | | |
| Sedan, 4d., 7p. | | | 4686 | 4895 | Manhattan Sedan | 2550 | 286 | 2836 | 3375 | Custom Eight-2206 | 3413 | 212 | 3625 | 4140 |
| Imperial, 7p. | | | 4887 | 4930 | HUDSON | | | | | Club Sedan | 3461 | 214 | 3675 | 4210 |
| CHEVROLET | | | | | Super Six-171 | | | | | Touring Sedan | 3860 | 235 | 4095 | 4380 |
| Stylemaster-EJ | | | | | Coupe, 2d., 3p. | 1782 | 128 | 1890 | | Conv. Victoria Coupe | | | | |
| Business Coupe, 2d. | 1080 | 80 | 1160 | 3050 | Brougham, 2d. | 1822 | 131 | 1953 | | Custom Eight-2226 | 4250 | 254 | 4504 | |
| Sport Coupe, 2d. | 1120 | 82 | 1202 | 3060 | Club Coupe | 1867 | 133 | 2000 | | Limousine, 7p. | 4406 | 262 | 4668 | |
| Town Sedan, 2d. | 1135 | 84 | 1219 | 3075 | Sedan, 4d. | 1870 | 133 | 2003 | | PLYMOUTH | | | | |
| Sport Sedan, 4d. | 1190 | 86 | 1276 | 3130 | Convertible Brougham | | | | | DeLuxe | | | | |
| Fleetmaster-EK | | | | | Commodore Six-172 | 1997 | 140 | 2137 | | Coupe, 3p. | 1139 | 66 | 1205 | 2977 |
| Sport Coupe | 1195 | 86 | 1281 | 3090 | Club Coupe | 2020 | 141 | 2161 | 3540 | Sedan, 2d. | 1164 | 68 | 1232 | 3047 |
| Town Sedan, 2d. | 1200 | 86 | 1286 | 3125 | Sedan, 4d. | | | | | Club Coupe | 1189 | 69 | 1258 | 3037 |
| Sport Sedan, 4d. | 1255 | 90 | 1345 | 3185 | Super Eight-173 | 1947 | 142 | 2089 | | Sedan, 4d. | 1214 | 70 | 1284 | 3082 |
| Cabriolet | 1525 | 103 | 1628 | 3390 | Club Coupe | 1950 | 142 | 2092 | | Special DeLuxe | | | | |
| Station Wagon | 1775 | 118 | 1893 | 3465 | Sedan, 4d. | 2077 | 149 | 2226 | | Coupe, 3p. | 1209 | 69 | 1278 | 2982 |
| Fleetline-EK | | | | | Commodore Eight-174 | 2100 | 150 | 2250 | 3600 | Sedan, 2d. | 1239 | 71 | 1310 | 3062 |
| Aerosean | 1225 | 88 | 1313 | 3125 | Club Coupe | | | | | Club Coupe | 1264 | 72 | 1336 | 3057 |
| Sedan | 1280 | 91 | 1371 | 3150 | Sedan, 4d. | | | | | Sedan, 4d. | 1289 | 74 | 1363 | 3107 |
| CHRYSLER | | | | | Convertible Brougham | | | | | Convertible Coupe | 1565 | 89 | 1654 | 3282 |
| Royal-Six | | | | | KAISER | | | | | Suburban | 1669 | 94 | 1763 | 3402 |
| Coupe, 2d., 3p. | 1561 | 87 | 1648 | 3373 | Sedan, 4d. | 1967 | 207 | 2174 | 3302 | PONTIAC | | | | |
| Sedan, 2d. | 1626 | 90 | 1717 | 3458 | LINCOLN | | | | | Torpedo Six | | | | |
| Club Coupe, 2d. | 1651 | 91 | 1742 | 3443 | Coupe, 6p. | 2360 | 163 | 2523 | 4032 | Business Coupe | 1287 | 100 | 1387 | |
| Sedan, 4d. | 1661 | 92 | 1753 | 3523 | Sport Sedan | 2395 | 165 | 2560 | 4090 | Sport Coupe | 1336 | 102 | 1438 | 3300 |
| Sedan, 8p. | 2043 | 112 | 2155 | 3977 | Convertible, 6p. | 2760 | 183 | 2943 | 4365 | Sedan, 2d. | 1350 | 103 | 1453 | 3305 |
| Limousine, 8p. | 2153 | 119 | 2282 | 4022 | Cosmopolitan | | | | | Sedan Coup | 1380 | 104 | 1484 | 3305 |
| Windsor-Six | | | | | Coupe, 6p. | 2925 | 192 | 3117 | 4372 | Sedan, 4d. | 1406 | 106 | 1512 | 3330 |
| Coupe, 2d., 3p. | 1611 | 89 | 1700 | 3383 | Sport Sedan | 2975 | 195 | 3170 | 4400 | Conv. Sedan Coupe | 1690 | 121 | 1811 | 3570 |
| Sedan, 2d. | 1691 | 93 | 1784 | 3468 | Town Sedan | 2975 | 195 | 3170 | 4420 | Conv. Sedan Coupe, DeLuxe | 1730 | 123 | 1853 | |
| Club Coupe, 2d. | 1701 | 94 | 1795 | 3448 | MERCURY | | | | | Streamliner Six | 1439 | 108 | 1547 | 3405 |
| Sedan, 4d. | 1711 | 94 | 1805 | 3528 | Coupe, 6p. | 1855 | 121 | 1976 | 3399 | Sedan, 4d. | 1487 | 111 | 1528 | 3460 |
| Sedan Traveler | 1816 | 102 | 1948 | 3610 | Sport Sedan, 4d. | 1875 | 122 | 1997 | 3458 | Station Wagon, Std. | 2092 | 143 | 2235 | |
| Convertible Coupe | 1991 | 109 | 2100 | 3693 | Convertible, 6p. | 2225 | 140 | 2365 | 3699 | Station Wagon, Del. | 2166 | 146 | 2312 | 3725 |
| Sedan, 8p. | 2093 | 115 | 2208 | 3977 | Station Wagon | 2495 | 155 | 2650 | 3758 | Torpedo Eight | | | | |
| Limousine, 8p. | 2213 | 121 | 2334 | 4052 | NASH | | | | | Business Coupe | 1332 | 102 | 1434 | |
| Saratoga-Eight | | | | | 600 Series | 1298 | 101 | 1399 | 2635 | Sport Coupe | 1381 | 104 | 1485 | 3365 |
| Coupe, 2d., 3p. | 1873 | 103 | 1976 | 3817 | Bus. Coupe | 1358 | 101 | 1459 | 2731 | Sedan, 2d. | 1395 | 105 | 1500 | 3375 |
| Sedan, 2d. | 1948 | 106 | 2054 | 3900 | Brougham, 2d. | 1363 | 101 | 1464 | 2826 | Sedan Coup | 1425 | 106 | 1531 | 3375 |
| Club Coupe, 2d. | 1958 | 107 | 2065 | 3930 | Slip, Sedan, 4d. | 1407 | 101 | 1508 | 2786 | Sedan, 4d. | 1451 | 108 | 1559 | 3415 |
| Sedan, 4d. | 1973 | 108 | 2081 | 3972 | Trunk Sedan, 4d. | 1538 | 110 | 1648 | 2731 | Conv. Sedan Coupe | 1735 | 123 | 1858 | 3645 |
| New Yorker-Eight | | | | | Brougham, Cust., 2d. | 1543 | 110 | 1653 | 2826 | Conv. Sedan Coupe, Del. | 1775 | 125 | 1900 | |
| Coupe, 2d., 3p. | 1973 | 108 | 2081 | 3837 | Slip, Sedan, Cust., 4d. | 1587 | 110 | 1697 | 2786 | Streamliner Eight | | | | |
| Sedan, 2d. | 2048 | 112 | 2160 | 3932 | Trunk Sedan, Cust., 4d. | 1642 | 121 | 1763 | 3312 | Sedan Coupe | 1484 | 111 | 1595 | 3460 |
| Sedan, 4d. | 2073 | 113 | 2186 | 3987 | Ambassador | 1659 | 120 | 1779 | 3412 | Sedan, 4d. | 1532 | 113 | 1645 | 3520 |
| Convertible Coupe | 2323 | 126 | 2449 | 4132 | Brougham, 2d. | 1701 | 120 | 1821 | 3387 | Station Wagon, Std. | 2137 | 145 | 2282 | |
| Town & Country-8 | | | | | Slip, Sedan, Cust., 4d. | 1839 | 129 | 1968 | 3412 | Station Wagon, DeLuxe | 2211 | 148 | 2359 | 3795 |
| Sedan, 4d. | 2496 | 136 | 2632 | 4300 | Trunk Sedan, Cust., 4d. | 1891 | 129 | 2010 | 3387 | STUDEBAKER—1948 | | | | |
| Convertible Coupe | 2873 | 155 | 3028 | 4332 | Brougham, Cust., 2d. | 1883 | 69 | 1952 | 3312 | Champion DeLuxe | | | | |
| Crown Imperial-8 | | | | | Surb. Sedan, 4d. | 2097 | 142 | 2239 | 3522 | Coupe, 3p. | 1347 | 99 | 1446 | 2600 |
| Sedan, 8p. | 3905 | 207 | 4112 | 4865 | Convertible | | | 2250 | | Sedan, 2d. | 1412 | 102 | 1514 | 2685 |
| Limousine, 8p. | 4005 | 212 | 4217 | 4875 | OLDSMOBILE | | | | | Coupe, 5p. | 1437 | 103 | 1540 | 2670 |
| CROSLEY | | | | | Series 66-Six | 1385 | 103 | 1488 | 3240 | Sedan, 4d. | 1442 | 104 | 1546 | 2735 |
| Sedan, 2d. | 888 | | | 1115 | Club Coupe | 1410 | 103 | 1513 | 3285 | Champ. Regal DeLuxe | | | | |
| Convertible | 949 | | | 1110 | Club Sedan | 1450 | 106 | 1556 | 3320 | Coupe, 3p. | 1417 | 102 | 1519 | 2620 |
| DE SOTO | | | | | Sedan, 4d. | 1520 | 108 | 1628 | | Sedan, 2d. | 1482 | 106 | 1588 | 2710 |
| DeLuxe | | | | | Club Coupe, DeLuxe | 1545 | 110 | 1655 | | Coupe, 5p. | 1507 | 107 | 1614 | 2690 |
| Coupe, 2d., 3p. | 1451 | 80 | 1531 | 3323 | Club Sedan, DeLuxe | 1585 | 112 | 1697 | | Sedan, 4d. | 1512 | 107 | 1619 | 2760 |
| Sedan, 2d. | 1516 | 84 | 1600 | 3418 | Sedan, DeLuxe, 4d. | 1725 | 120 | 1845 | 3550 | Convertible | 1845 | 125 | 1970 | 2875 |
| Club Coupe | 1541 | 85 | 1626 | 3413 | Convertible Coupe | 1725 | 120 | 1845 | 3550 | Commander-DeLuxe | | | | |
| Sedan, 4d. | 1551 | 86 | 1637 | 3448 | Station Wagon | 2305 | 151 | 2455 | | Coupe, 3p. | 1632 | 119 | 1751 | 3140 |
| Custom | | | | | Series 76-Six | 1475 | 109 | 1584 | 3425 | Sedan, 2d. | 1697 | 122 | 1819 | 3230 |
| Sedan, 2d. | 1581 | 87 | 1668 | 3443 | Club Sedan | 1545 | 114 | 1659 | 3500 | Coupe, 5p. | 1722 | 123 | 1845 | 3210 |
| Club Coupe, 2d. | 1591 | 88 | 1679 | 3398 | Sedan, 4d. | 1615 | 116 | 1731 | 3445 | Sedan, 4d. | 1727 | 124 | 1851 | 3265 |
| Sedan, 4d. | 1601 | 88 | 1689 | 3453 | Club Sedan, DeLuxe | 1685 | 120 | 1805 | 3535 | Comm. Regal DeLuxe | | | | |
| Convertible Coupe, 2d. | 1891 | 104 | 1995 | 3638 | Club Coupe | 1440 | 106 | 1546 | 3355 | Coupe, 3p. | 1812 | 128 | 1940 | 3245 |
| Sedan, 8p. | 1893 | 109 | 2092 | 3837 | Sedan, 4d. | 1465 | 107 | 1572 | 3420 | Sedan, 2d. | 1837 | 129 | 1966 | 3225 |
| Limousine, 8p. | 2103 | 115 | 2218 | 3995 | Club Coupe, DeLuxe | 1505 | 109 | 1614 | 3445 | Sedan, 4d. | 1842 | 130 | 1972 | 3280 |
| Suburban | 2283 | 125 | 2408 | 4012 | Club Sedan, DeLuxe | 1575 | 112 | 1687 | | Land Cruiser | 2005 | 138 | 2143 | 3340 |
| DODGE | | | | | Sedan, DeLuxe, 4d. | 1600 | 113 | 1713 | | Convertible | 2178 | 147 | 2325 | 3420 |
| DeLuxe | | | | | Convertible Coupe | 1640 | 115 | 1755 | | WILLIS | | | | |
| Coupe, 2d., 3p. | | | | | | | | | | | | | | |

NEW STUDEBAKER TRUCKS NOW ON THE WAY!



They've just gone through their
final testing on Studebaker's 800-acre
proving ground!

They're the postwar world's most
advanced transport vehicles...
years ahead in design and performance!

Watch for announcements
of this 1949 super line!

STUDEBAKER
BUILDER OF TRUCKS YOU CAN TRUST



Above: Davies Buick Co., Atlantic Refining Co., and Philco Distributors co-sponsor home games of Phila. Athletics and Phillies. L. to R.: E. H. Bauer, Gen. Mgr. Davis Buick; Roy Mack, Athletics; Mr. Davis; Babe Alexander, Phillies.

G. H. (Pat) Thornton, presenting Thornton Fuller trophy to Wally Stefaniw, voted the most valuable player on the Phila. Rockets ice hockey team.

Dealers can increase sales and service volume by television advertising

Does Television Advertising Pay?

DAVIS BUICK COMPANY, of Philadelphia, will co-sponsor television broadcasts of all major league baseball games in Philadelphia during the 1948 season. Another automobile dealer in the Philadelphia area, Thornton-Fuller, a Dodge-Plymouth agency, sponsored televised ice hockey games this past winter. Both companies

have attracted considerable publicity at relatively low cost.

Thornton-Fuller believes that by advertising through the medium of television, an automobile dealer is appealing to that section of the public which has a fair, or better than average income—the same people who give him many of his sales dollars. At the same time, by sponsoring programs of particular interest

to men, such as sports, he is displaying his merchandise to an audience interested in automobile service and sales.

Thornton-Fuller, in sponsoring the ice-hockey games, presented carefully planned films before the game and at the end of the first period. Davis Buick plans to use this

CONTINUED ON PAGE 94

WAGNER HYDRAULIC BRAKE SERVICE MERCHANDISERS

help you turn out faster
more profitable service...



Put Wagner Cabinet Merchandisers to work in your shop. These "silent salesmen" will help you to sell more brake service. They display a compact but complete stock of parts... they enable you to give your customers faster, more efficient service... they are easy to keep complete and up-to-date. You'll find Wagner Merchandisers valuable—try them!



WAGNER
Lockheed Hydraulic
BRAKE FITTING ASSORTMENT
FL-33A

An assortment of hydraulic brake line connectors for popular cars and trucks. In attractive metal box that fits any Wagner cabinet.

WAGNER
Lockheed Hydraulic
BRAKE HOSE
FL-410

Service all popular cars and trucks. In attractive metal Display Cabinet.



WAGNER
Lockheed Hydraulic
BRAKE PARTS ASSORTMENT
FL-20D

Fast moving Wagner parts for popular cars and trucks. In attractive metal box that fits any Wagner cabinet. Other popular assortments also available.

WAGNER
HYDRAULIC BRAKE
REPAIR KITS
FL-405A

Complete kits of replacement parts for MASTER CYLINDERS and WHEEL CYLINDERS. Complete coverage for all popular makes and models of cars and trucks.



EVERY REPAIRMAN NEEDS

Bulletins HU-17G and HU-197...
Tips for better Brake Service — free on request

Wagner Electric Corporation

6498 PLYMOUTH AVE., ST. LOUIS 14, MISSOURI



WAGNER
Stop-Lite Switch
MERCHANDISER
FL-334A

Calls attention to a neglected item. Complete, handy coverage that builds added profits in stop light repair service.



LOCKHEED HYDRAULIC BRAKE PARTS and FLUID • NoRd
CoMaX BRAKE LINING • AIR BRAKES • TACHOGRAPHS
ELECTRIC MOTORS • TRANSFORMERS • INDUSTRIAL BRAKES

A48-3

Will Pumps Go Dry? . . . CONTINUED FROM PAGE 35

are outlined (and detailed on page 34) to improve motor vehicle performance.

If each of these were applied to the 40,000,000 motor and farm vehicles effectively, there would be no gasoline shortage. That may be asking too much. Let's take a major portion of all vehicles and improve their per-

formance and you've accomplished more in gasoline savings than any Congressional investigating committee hearing will ever produce.

Gasoline and tractor fuels are coming through and will be distributed equitably. Most oil companies have promised their outlets the same quotas as last year

and without discrimination on the matter of distribution. One company, Sun Oil, has not only agreed to deliver 5 per cent more than in 1947 to all outlets but has allotted additional gasoline, up to 36 per cent, for outlets which have recorded sales gains over periods established by the company.

Despite petroleum's all-out effort to match record-breaking supply with abnormal demand, one factor remains unknown, at this writing—Military Requirements. What amount of petroleum products will be required in the country's preparedness program? (Anyone in contact with official Washington in the spring of 1948 quickly learned that re-arming America as a force for peace was no idler's dream.)

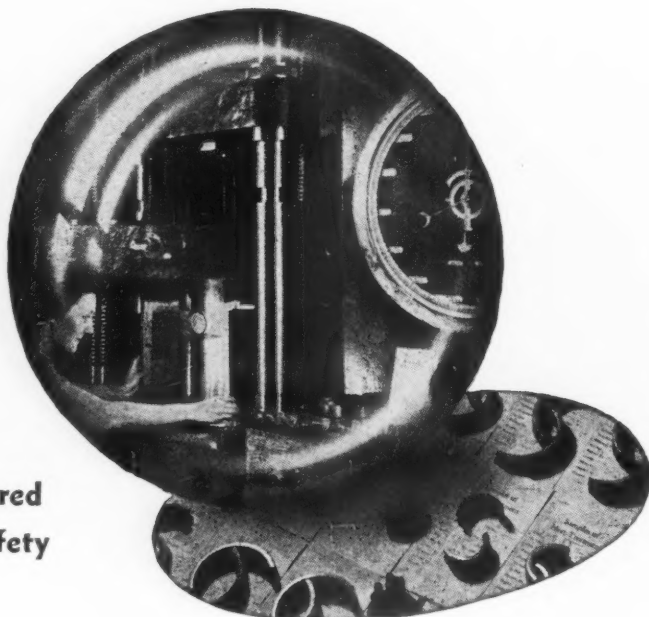
If military requirements for stockpiling or other purposes are increased substantially the gasoline-supply situation is likely to become acute.

If there is no substantial increase in military needs, a general shortage of motor fuels does not appear likely, Washington sources report.

The National Petroleum Council, in a mid-April report to the Department of Interior, had this to say about the gasoline situation: "While supplies will be tight and conservation measures

CONTINUED ON PAGE 72

Fractured for safety



These bearing parts are some of a day's vital statistics in Federal's "bureau of standards." Here sample lots of race rings and balls are crush-tested after hardening to determine their load bearing strength, etch tested for any minute cracks in the fracture and Rockwell checked for hardness.

Conditioning a Federal Ball Bearing to deliver the right degree of resilience, toughness and resistance to compression and distortion starts with hardening the race rings *right through to the core* to withstand the severe pressure of the ball on the ball track, particularly under heavy load. Automatic electric controls insure a uniform heat-treat throughout the entire Federal hardening cycle. The silky fracture tells the "inside" story in inspection; performance proves it.

Every fourth operator is an inspector at Federal during the more than 100 individual manu-

facturing, inspection and cleaning operations that go into every Federal automotive bearing. That's why Federals are original equipment on so many cars.

Stock Federal Ball Bearings for the tough repair jobs. They're time-savers because they fit *right every time*. And they'll help you win friends and influence customers to come back again.

Get to know the Federal *complete* ball bearing line by getting to know your NAPA jobber. There's one near you.

THE FEDERAL BEARINGS CO., INC.
Poughkeepsie, New York

Makers of Fine Ball Bearings

Distributed Nationally Through
LOCAL N.A.P.A. WAREHOUSES AND JOBBERS



Quality Since 1908

FEDERAL BALL BEARINGS

ONE OF AMERICA'S LEADING BALL BEARING MANUFACTURERS



"And I want a vacation this year and NOT driving two new cars from Detroit either!"

Here's how Du Pont will help you make more money on anti-freeze this fall



The new "Zerone" and "Zerex" price schedules increase the actual cash you receive for every gallon you sell.



In its nation-wide advertising program this fall, Du Pont will remind motorists of the importance of having their cooling systems thoroughly conditioned before installing anti-freeze.



Car-owners will be told to expect to pay a reasonable additional charge for carefully inspecting, checking and preparing the cooling system for anti-freeze.

Trade leaders have repeatedly pointed out that all the checking and preparation of the cooling system that precedes proper installation of anti-freeze is becoming increasingly impractical as a free service under today's cost of service station operation.

Du Pont's national advertising campaign this year will be slanted in your interest. It will appear throughout the country in leading national magazines and newspapers—will reach millions of car-owners.

We believe it will be to your interest to tie in with this money-making program.



Will Pumps Go Dry? . . . CONTINUED FROM PAGE 70

must continue, the general outlook is certainly not critical, at least for the next three months, barring a possible increase in military demand or other unpredictable factors."

This guarded optimism is based on the following facts: 1) gasoline stocks during April were at a new high; 2) produc-

tion of petroleum products this year is expected to be 8 per cent higher than during 1947; 3) gasoline production has increased about 10 per cent in recent weeks, in anticipation of summer demand.

The petroleum industry is urging the establishment of a voluntary allocations program to

handle spot shortages on a local basis in an effort to ease consumer hardships, such as was done when home heating oil was in tight supply last winter. Such a plan requires governmental authorization.

In the meantime, a campaign to inform farmers on the supply-and-demand situation has gone into motion, for a danger spot seems to exist in the supply of tractor fuels.

Eighty per cent of the land on the nation's farms is plowed by tractors. Eighty per cent of the wheat, oats and other small grains is harvested by petroleum-powered equipment. Ten thousand self-propelled combines are in operation on American farms (there were none in 1941.) Nine thousand farm airplanes dust and spray fields, sow seeds, control weeds and spread fertilizer. Three million farm tractors operate fifteen million implements. In fact, automotive farming has made it possible for the farmer to increase his production of food by 40 per cent in the past decade.

Efficient performance of motor and motorized farm vehicles is a sure bet for conservation of petroleum.

How New Lowest-Priced Welder Simplifies Arc Welding

World's Easiest Welding. "Lincwelder's" exclusive "Arc Booster" produces an *extra burst* of welding current the instant the electrode touches the work to start the arc. Makes arc striking automatic and avoids electrode sticking. Here is the world's easiest welding.

Dial Tuning Control. The *exact* welding current is quickly selected in a broad welding range of 20 to 180 amps. No plugs to shift, no taps to change.



Accessories at slight extra cost.

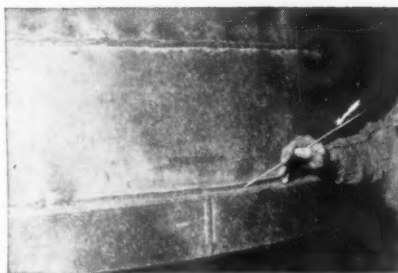
Price
\$150.00
freight
prepaid

"Lincwelder" 180 A.C.
Ideal for all repairs.

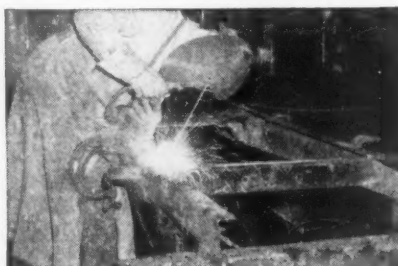
Built for Rural Power Lines. Approved by power companies and REA. Current input never exceeds 37 amps. when welding at 180 amps.

Safe to Operate. Maximum open circuit voltage of the "Lincwelder" is 52 volts . . . safe under all conditions. "Lincwelder's" "Arc Booster" eliminates high open circuit voltages and high frequencies, needed on some welders to make arc striking possible.

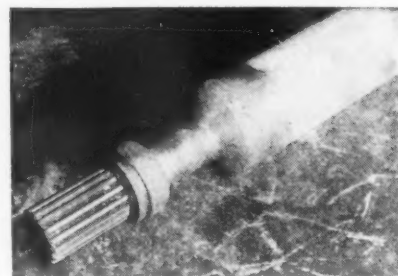
Lowest-Cost Welder. Has the same high quality construction and many features found only in Lincoln industrial welders, yet sells at the lowest price of any welder of this capacity.



Reinforce Trailer Bodies. A reinforcing plate and bumper rim are quickly welded to this old trailer body. A few minutes' work produces a strong water-tight joint.



Remodel Truck Frames. Arc welding makes short work of this frame rebuilding job. The cross member position is changed by welding the member to its new location on the side channels with "Fleetweld 47" electrode.



Alter Drive Shafts. An old drive shaft is sawed out at the pinion end and the pinion welded to the shortened shaft.

See it . . . try it yourself. On display at your local Lincoln Welddealer. Ask for full details in Bul. 370. The Lincoln Electric Company, Dept. 323, Cleveland 1, Ohio.



"Would it disturb you if I practised my putting?"

It's NEW...



FORD Seal of Service Satisfaction

Here's a great new "plus" for your Ford service customers—the just-introduced Genuine Ford Parts Seal that says they're real!

Placed on your customer's Ford, it assures him that you have used Genuine Ford Parts in completing the service job. And that makes more customer satisfaction, builds more business because Genuine Ford Parts are made right to fit right and last longer.

Call or write your nearest
Ford Parts Distributor or
Dealer for full information.



Genuine Ford Parts - **Right** For Fords!

promises to nobody."

Sawyer looked as if he were about to announce the end of the world. "Maybe I'd better speak to Pop," he said.

Larry gave a short laugh but there was a hollow ring to it. "I was only kiddin', Buzz," he said. "We'll have it ready for you in an hour. How's that?"

Sawyer was not to be cheered up. "All right," he said, "If that's the best you can do."

Larry was on the point of loosing a flood of indignant profanity, but he thought of Pop, and contented himself with a gruff, "Okay."

Sawyer had scarcely disappeared through the shop door

when Pop emerged from the shop office and walked over to Larry's bench.

"What brings Sawyer back?" he asked.

"More trouble with that Olds of his," said Larry, without looking up.

"But we only put in a new disk and cover assembly yesterday."

"I know. But he's got vibration now. It ain't got nothin' to do with the clutch. Probably a bent fan blade or a bolt loose in a universal, or somethin'."

Pop's blue eyes narrowed. "You sure it ain't the clutch?" he asked. "I seem to remember one time when you overlooked somethin' on a job you was doin'."

"It so happens," said Larry, swinging around belligerently, "I didn't work on Buzz's crate. I give it to that kid you hired to get in my way."

"Well, let's hear what he's got to say."

"Hey Tommy!" bawled Larry. "Come here."

Tommy responded promptly.

"Pop wants to know how you loused up that clutch job you done on Buzz Sawyer's rock crusher. I didn't have nothin' to do it with it, remember?"

"The lady doth protest too much," said Pop.

"What's 'at?" demanded Larry.

"I was just quotin' Shakespeare," said Pop.

CONTINUED ON PAGE 76

Every Wayne
2 STAGE UNIT
Tested

NOT ONCE IN A WHILE BUT

EVERY COMPRESSOR GETS THIS SCIENTIFIC TEST

WAYNE is the only manufacturer who gives every two stage compressor a scientific test before shipment. Wayne pioneered the rating of compressors on actual air production instead of theoretical displacement and Wayne Air Compressors have always exceeded the standards of efficiency indicated by the PAEA label.

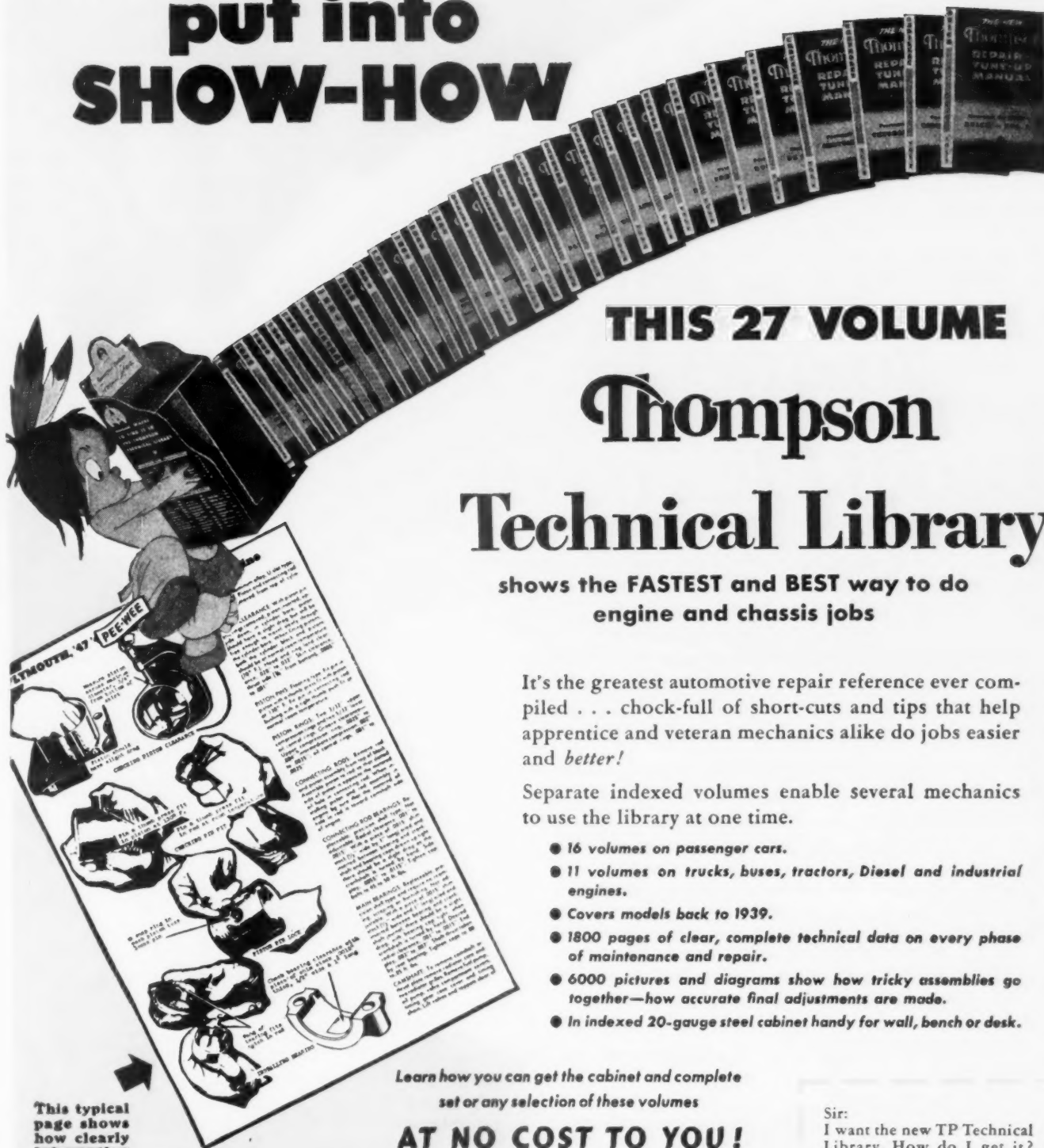
THE WAYNE PUMP COMPANY
FORT WAYNE 4, INDIANA

Wayne AIR COMPRESSORS

for your protection



KNOW-HOW put into SHOW-HOW



THIS 27 VOLUME Thompson Technical Library

shows the **FASTEST** and **BEST** way to do
engine and chassis jobs

It's the greatest automotive repair reference ever compiled . . . chock-full of short-cuts and tips that help apprentice and veteran mechanics alike do jobs easier and *better!*

Separate indexed volumes enable several mechanics to use the library at one time.

- 16 volumes on passenger cars.
- 11 volumes on trucks, buses, tractors, Diesel and industrial engines.
- Covers models back to 1939.
- 1800 pages of clear, complete technical data on every phase of maintenance and repair.
- 6000 pictures and diagrams show how tricky assemblies go together—how accurate final adjustments are made.
- In indexed 20-gauge steel cabinet handy for wall, bench or desk.

Learn how you can get the cabinet and complete
set or any selection of these volumes

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Start now by calling your TP jobber—or
simply mail him this coupon today.

This typical
page shows
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See Your
Distributor of

Thompson  **Products**

CLEVELAND • DETROIT • LOS ANGELES

"What shop did he ever work in?" asked Larry.

"None. But he's one guy you'd like. He knew less about automobiles than you do."

"Oh," sneered Larry, "so it was only a dirty crack. Well—"

"Skip it," said Pop. Then he turned to Tommy. "I only wanted to make sure nobody

slipped on that job. You're positive it was okay when you delivered it?"

Tommy hesitated and glanced at Larry, who found this a convenient time to study his nails.

"Well?" urged Pop.

"I didn't quite finish the job," said Tommy. "Larry took me off it to do something else."

Pop swung his glance to Larry. The latter, seeing no way to avoid an explanation, took the offensive.

"Well, he'd wasted practically the whole day on it," he said. "I had to do somethin' if we ever wanted to get Buzz's crate outa here."

"How much did you do?" asked Pop, regarding Larry narrowly.

"Well I—uh—I slipped in the cover screws and pulled 'em up tight. It woulda took the kid here the rest of the afternoon."

"I was doing all right," protested Tommy. "I—"

Pop held up a hand for silence.

"So," he said, with a sarcastic edge in his voice, "you picked the heavy end of the job and put back the cover screws? You're like an old uncle of mine who used to live with us on the farm. Every time we started to split rails, he'd volunteer to hold the wedge."

Larry snorted. "So it ain't enough to do most of the kid's work for him," he said. "I gotta do all the heavy work."

"At least the jobs I do don't bounce back," said Tommy, and Pop grinned.

"But this ain't clutch trouble, I tell you," snapped Larry. "It's only a bent fan blade or somethin' like that."

Pop pulled at the lobe of an ear. "Did you check it?" he asked.

CONTINUED ON PAGE 78



FIT IT RIGHT WITH A CENTRAL MIKE

Set No. 745RL—Outside Micrometers. Range: 0 to 4 inches by thousandths. Four micrometers, complete with Ratchet Stops, Lock Nuts and Standard Test Gauges in DeLuxe Plush-Lined Case.

CENTRAL MIKE SAYS:
"HERE'S THE MARK OF A GOOD MECHANIC!"




Set No. 808—Inside Micrometer. Range: 1½ to 8 inches by thousandths. Complete with Extension Handle in DeLuxe Plush-Lined Case.

There's a Central Micrometer for every requirement. See your jobber or write for catalog.

Central Micrometers complete the tool box of a good auto mechanic. The Certified Accuracy of these fine tools helps him turn out accurate work the first time, every time.

With Central Micrometers each measurement is accurate, each fit true, each machining job right to size. That's why experienced men in successful shops use Central—the fastest selling Micrometers in the automotive field throughout the world.

THE CENTRAL TOOL COMPANY
 462 Wellington Avenue, Cranston 10, R. I.

CENTRAL
Certified Accuracy
MICROMETERS

FOR HALF A CENTURY SPECIALISTS IN FINE MICROMETERS



"They won't listen to me — YOU tell them we want gas!"



**BACK
AGAIN!**

LAST SEASON — due to material shortages—we couldn't supply any "Trek" anti-freeze at all. This year, "Trek" anti-freeze is back on your buying list. True, quantities are limited. But we know that you want *all* you can get. "Trek" brand anti-freeze (treated concentrated methanol) is the superior

volatile type anti-freeze. Its special inhibitors give sure protection against rust, corrosion, foaming, and clogging.

The term "TREK" is a registered trade-mark of

**NATIONAL
CARBON COMPANY, INC.**

30 East 42nd Street, New York 17, N. Y.

Unit of Union Carbide and Carbon Corporation



**In gallon cans only
RETAIL PRICE**

**\$1³⁵
— PER GAL.**

"You ain't give me a chance."
"Then what makes you so sure?"

"Well," began Larry, "maybe it is somethin' else. But it couldn't be the clutch."

Pop took a quarter from a trousers pocket and flipped it idly.

"You wouldn't want to risk

any money on that diagnosis, would you?" he asked Larry.

Watching the leisurely rise and fall of the coin, Larry kept his silence for a second or two. Then he said, "I don't want to take your dough. But I can still prove I'm right."

"Okay," said Pop. "Tommy," he added, "crawl under there

and back out them cover screws."

"I suppose that's gonna show you what's wrong?" said Larry.

"Could be," said Pop. "Ever hear of square pegs in round holes?"

"No but I've heard of square heads," answered Larry, with a malicious grin.

"It ain't the shape of a man's head that counts. It's how he uses it."

When Tommy reappeared, holding the cover screws, Pop picked out two and showed them to Larry.

"See this one?" he asked.

"So what?"

"It's got a long shoulder."

"Amazin'," said Larry.

"But this one ain't."

"Remarkable."

"The remarkable thing," said Pop, "is how you managed to get 'em in the wrong holes."

"Who said I did?"

"I did. When you do that, you throw the flywheel outa balance on account of the difference in the weight of the screws."

"And that's why Mr. Sawyer had vibration," exclaimed Tommy.

"Who asked you?" demanded Larry.

"He's right," said Pop.

"How are we gonna prove it?" asked Larry.

"Put them screws in accordin'

CONTINUED ON PAGE 80

LOOK TO



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THE AUTOMOBILE UNDERBODY
PROTECTIVE COATING AND
SOUND DEADENER

FOR
UNDERCOATING QUALITY

Because all Fendix is made under carefully controlled conditions, you get a more uniform material that sprays better, easier . . . goes on more smoothly . . . insures a better undercoating job every time.

And specially planned, free, promotion pieces help you sell more Fendix . . . direct service on supplies or equipment keeps your Fendix jobs moving. These are just some of the reasons why there is

MORE FOR YOU FROM FENDIX

Write for a Davison factory representative or authorized distributor to call and give you the full story.

Fendix is listed under Re-examination Service of the Underwriters' Laboratories, Inc.

THE DAVISON CHEMICAL CORPORATION
Progress through Chemistry



BALTIMORE-3, MD.

*B ©TDCC



"Can I use the camel tonight, Pop?"

NEW!



UTILITY MODEL ALLEN

TUNE-UP EQUIPMENT

The new Allen E-318 Motor Analyzer and E-319 Syncrograph open new profit horizons to service establishments whose volume does not warrant the purchase of larger and more complete equipment. These are precision instruments—accurate to within 2%—made with the same care, the same high quality materials as all other Allen products. Now, the advantages of dependable tune-up equipment are yours at a very low cost.

E-318 MOTOR ANALYZER—Includes Condenser, Volt-Amp., Coil and Dwell-Tach Testers, Compression and Vacuum Gauge.

E-319 SYNCROGRAPH—Makes complete and accurate distributor tests both on and off the car.

Both models have cabinets with hinged tops and storage space for tools and accessories. Caster mounted base includes battery carrier. Attractive red and black finish.

Send coupon today for complete details.



ALLEN

ELECTRIC AND EQUIPMENT COMPANY • KALAMAZOO, MICH.

MOTOR ANALYZING EQUIPMENT • BATTERY CHARGERS • TUNE-UP EQUIPMENT • WELDING EQUIPMENT

ALLEN Electric and Equipment Co.
2332 North Pitcher Street
Kalamazoo, Michigan
 Please send me complete information on the
 New Allen E-318 Motor Analyzer and the
 New Allen E-319 Syncrograph.
 Name.....
 Address.....
 City.....State.....

to the instruction book and see whether you get any vibration. If you do, I'll pay you five bucks."

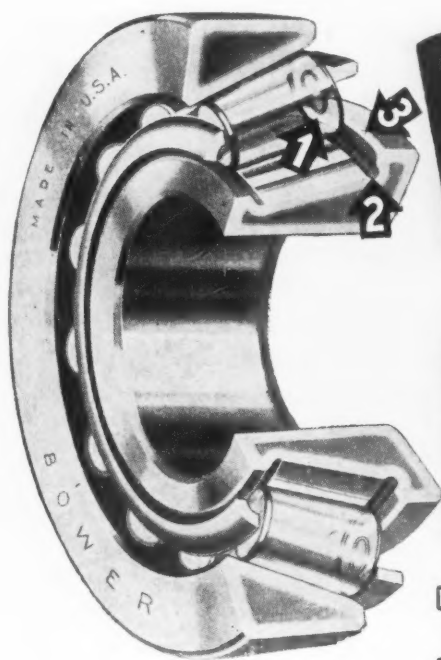
Larry shook his head. "Any time you risk that much cabbage, you're playin' a sure thing. But," he added, "some day you're gonna make one of them wild guesses and you're gonna live to

regret it."

Pop grinned. "I've already lived to regret some things," he said.

"Like hirin' me, I suppose!"

"Larry," said Pop, "if you could diagnose trouble the way you can read my mind, you'd be worth a hundred bucks more a week."



1 TWO ZONE CONTACT
ASSURES PERFECT ALIGNMENT—
SQUARED-UP ROLL HEADS.

2 EXTRA DEEP OIL GROOVE
PROVIDES BETTER LUBRICATION—
LONGER LIFE

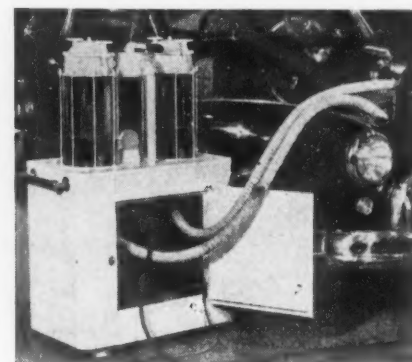
3 ROUNDED FLANGE SHOULDERS PREVENT
CHIPPING AND NOISE—SMOOTH
CONTACT. THESE, PLUS THE FAMOUS
SPHER-O-HONED FINISH OF BEARING SUR-
FACES, ARE ASSURANCES OF LONG, FAITH-
FUL SERVICE AND S-M-O-O-T-H ROLLING.

AHLBERG
BEARING COMPANY
3028 WEST 47TH STREET
CHICAGO 32, ILLINOIS

See your Ahlberg jobber today for Bower Bearings and a complete bearing service including ball and roller bearings for every requirement—competent, up-to-the-minute design and application counsel if you need it.

M-12 Pressure Purger Cleans Cooling Systems

A new cooling system cleaner, known as the Pressure Purger, according to the manufacturer, Choldun Mfg. Co., New Haven, Conn., combines three important actions to dislodge entrapped particles and heavy sludge and to remove grease, oil, rust, and scale in the cooling system. The triple action consists of mechanical agitation, pressure filtering, and a pre-heated chemical solution, all acting on the radiator at the same time. The manufacturer claims that this triple

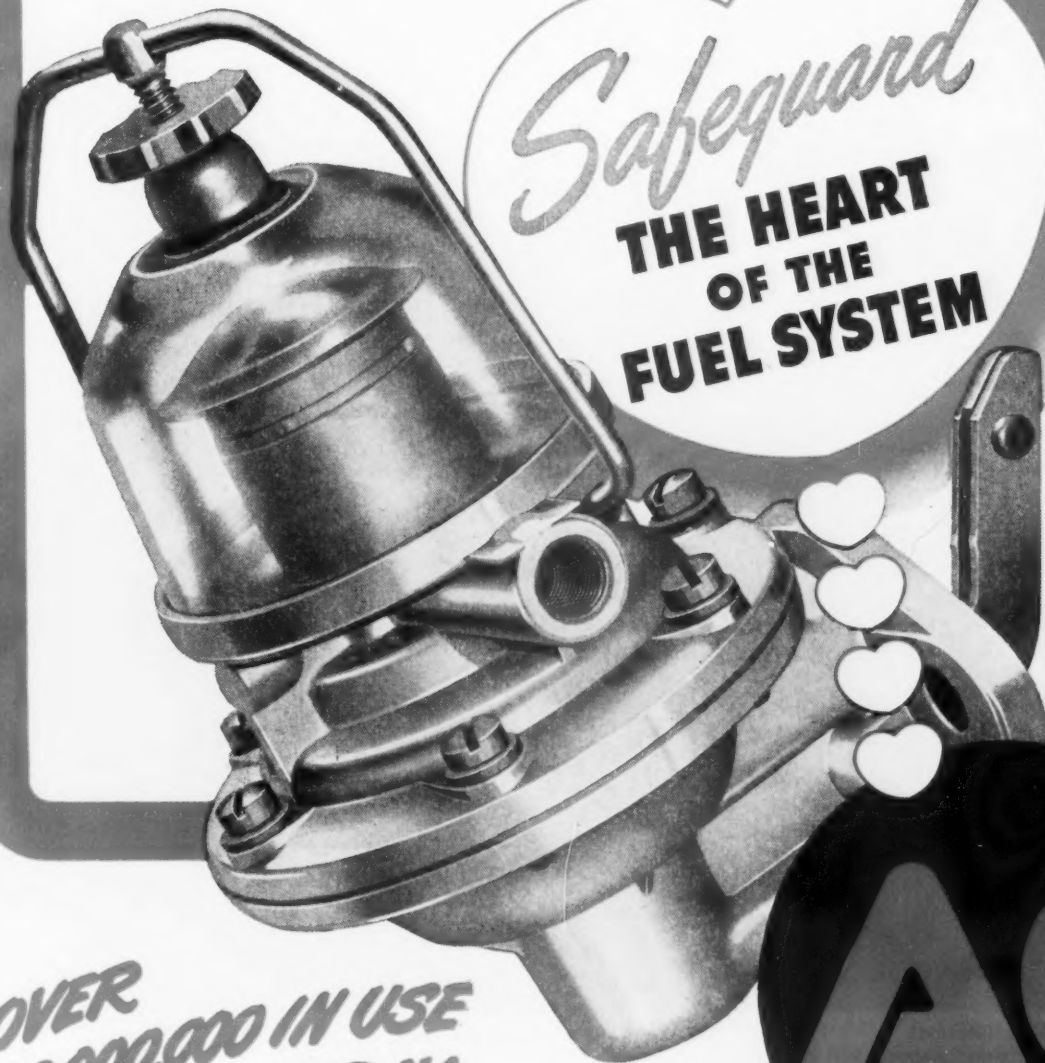


action can also be applied to the block and thereby completely clean the cooling system. There are no moving parts, and it is said to require a minimum of maintenance.

For more information use coupon on page 65.



"In my opinion, Fletcher, a regular soft drink cooler would be much more profitable!"



Safeguard
**THE HEART
OF THE
FUEL SYSTEM**

**OVER
30,000,000 IN USE
TODAY**

One of the most reliable parts of an engine is the AC Fuel Pump, heart of the fuel system. That's because it is *first quality* in design, material and manufacture . . . built to meet the engine maker's own requirements.

QUALITY FEATURES

A comparative analysis shows that there are from 27 to 38 additional quality features built into AC Fuel Pumps. These quality features are in:

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. . . Rocker Arm . . . Drain Petcock . . . Screen . . .
Valve Cage Retainer . . . Lock Washers . . . Bushings
and Linkage . . . Valve Cages . . . Rocker Arm Pin.

It's the many little operations that make quality. Protect your reputation . . . assure customer satisfaction . . . by replacing worn pumps with new AC's and making repairs with authentic AC Repair Kits and Diaphragm Kits.

AC
**FUEL
PUMPS**

SEND FOR AN AC PUMP SHOP MANUAL

Field Service Department, AC Spark Plug Division, G. M. Corp.
910 Mott Foundation Building, Flint 3, Michigan

Gentlemen: Please send at once, no charge, the AC Shop
Manuals checked:

- | | |
|---|--|
| <input type="checkbox"/> How to Service Spark Plugs | <input type="checkbox"/> HOW TO SERVICE FUEL PUMPS |
| <input type="checkbox"/> How to Service Spark Plug Cleaner | <input type="checkbox"/> How to Service Air Cleaners |
| <input type="checkbox"/> How to Service Oil Filters | <input type="checkbox"/> How to Service Speedometers |
| <input type="checkbox"/> How to Service Ammeters and other Instruments MA-5 | |

NAME _____

FIRM _____

STREET ADDRESS _____

CITY _____ STATE _____

Blackhawk gives you a "New

*** ITS BASIC DESIGN IS DIFFERENT**



Wide Tip-Proof Base
Cup shape prevents jack from sinking in soft ground.



Full 18" Lift
Toe adjusts from low of 5" from ground to high of 26".



Stand to Operate
No craned necks or sore backs from squinting under cars.

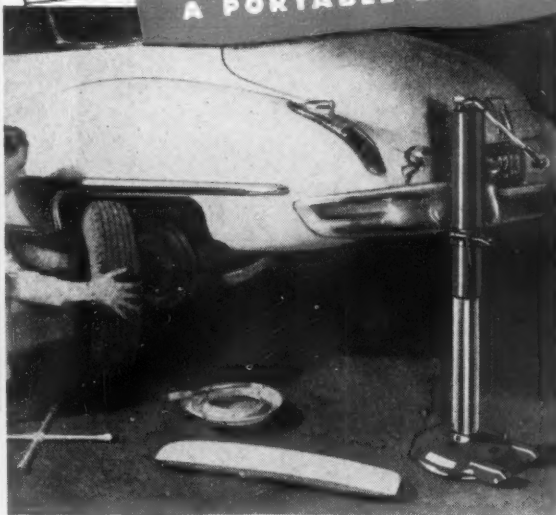


Easily Carried
Weighs 38 lbs. Easily tossed in wrecker or Service Car for road calls.



Portable
Rolls to the job anywhere. Ideal for close, cramped quarters.

A PORTABLE LIFT FOR EVERY LIFTING SERVICE



FASTER TIRE AND WHEEL CHANGES

Lifts deep-skirted fenders above tires! Exposes full wheel! No time wasted positioning jack *under* car — lifts at any convenient spot — bumper or bumper bracket. User stands to operate lift.



BODY AND FENDER WORK

Lifts body and fenders high enough to allow maximum space for body men to see what they are doing and to remove smashes and dents safely, conveniently and comfortably.

NEW

These Blackhawk Products are now back!



**TB-7
"WINGS"**

PASSENGER CAR JACK

Here's a jack car owners love. Compact, ideal for low-slung cars — and you can guarantee its dependability.



J-18

**"PICK-UP"
BUMPER JACK**

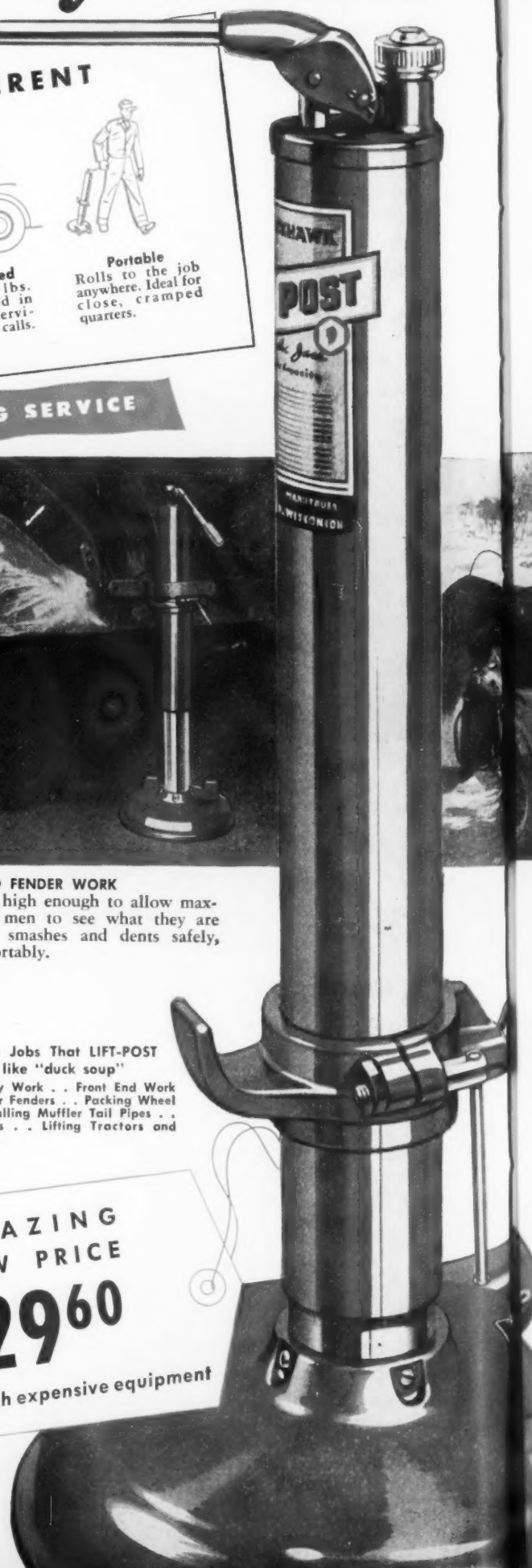
This is a sweetheart to sell! Tell 'em they don't have to bend a knee to operate it. Controls are at the top — an original Blackhawk feature.

A Few More Jobs That LIFT-POST handles like "duck soup"

Greasing . . . Body Work . . . Front End Work
. . . Washing Under Fenders . . . Packing Wheel Bearings . . . Installing Muffler Tail Pipes . . . Locating Squeaks . . . Lifting Tractors and Farm Implements.

**AMAZING
LOW PRICE
\$29⁶⁰**

Replaces much expensive equipment



Lift"to New and Bigger Profits Revolutionary New

LIFT-POST*

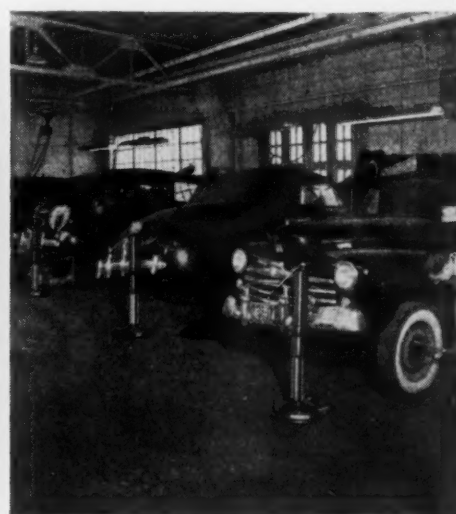
An Entirely New Concept in Hydraulic Lifting Power



FASTER EMERGENCY ROAD SERVICE
Light and compact, easily carried in a tow truck or Servi-Car. Speedily and safely lifts cars and small trucks on any kind of surface, even in soft, muddy holes.



WATERPROOF AND FOOLPROOF FOR WASH RACKS
Water or dirt can't hurt it. Working parts are fully enclosed. Makes it easy to get at and clean under fenders. Note close quarters where service jack wouldn't possibly fit.



IDEAL FOR INDIVIDUAL MECHANIC'S USE
Gives mechanics elbow room to work — does not take up floor space. It's dependable and safe, too. And there's no tripping hazard because of dangerous, extended handles.

- HANDLES ALL CARS ● SERVES AS AN AUXILIARY LIFT
- SAVES YOU HUNDREDS OF DOLLARS IN EQUIPMENT

LIFT-POST is the first new idea in lifting equipment in 15 years—and again it's a Blackhawk creation. It opens a world of new opportunities for quicker, better and easier service work—with resulting extra profits for you!

LIFT-POST has more lifting utility than any other piece of equipment you've ever seen. It amazes everyone — wherever it's used, it's hailed as the answer to lifting headaches. It's like a new right hand — does many new and old jobs better and easier — gets mechanics off their backs and onto their feet. Once you start using LIFT-POST, you won't trade it for a hundred bucks.

*There is *only one* LIFT-POST — it is an exclusive, NEW Blackhawk Product. Get your order in fast with your Blackhawk Jobber because LIFT-POST is a sensation!

THE MOST VERSATILE LIFT ON THE MARKET

Prove it for yourself! Just look at the few uses shown here—you'll immediately think of dozens more to speed your work, and bring you new, faster profits.

LIFT-POST is a must in every shop and service station—it's usable everywhere. Rolls to the job, is placed and in operation in a few seconds. Nothing can touch it for dependable utility.

Built expressly for the new low-slung cars with deep-skirted fenders. LIFT-POST will even lift the 1948 Cadillac so the wheel is off the ground. For every department, LIFT-POST supplies tons of power and universal versatility at pennies of cost.

A Product of BLACKHAWK MANUFACTURING CO., Milwaukee, Wisconsin

BLACKHAWK

Pace-Setter in Developing Practical Service Equipment

than there is at 140 degrees.

Another important act is to replace all rotted, leaking, or collapsed hoses with new ones since the matter in decayed hoses deter circulation.

The baffle plates in the upper tank of the radiator are another possible trouble spot and may be loose and fallen onto the core

openings so as to close off circulation. If this is true the tank should be removed and the plate placed back in its proper position.

The water pump can be checked by watching the water pumping action. If the shaft is bad, the key sheared, or the impeller worn, the pump must be

overhauled or replaced.

Cylinder head gasket leakage is another cooling system malady and this can be checked by rapidly accelerating the engine and looking for a water level rise or bubbles, either of which indicate gasket seepage or a blown gasket. Also see if there is oil on the water. If exhaust gas is leaking into the cooling system, acids are formed which rapidly corrode the radiator and the gasket must be replaced.

One circulation trouble often overlooked is the water distribution tube in the block which often corrodes and rots out so that the cooling effect is not directed at the proper hot spots.

Of course, along with leakage the most common cause of overheating is radiator and block clogging with rust, scale and grease. When draining the mechanic can get a fair idea of how badly the system is clogged from how it flows out when the lower hose is disconnected and from the drained water's condition. If the radiator has cold spots instead of an evenly distributed hot-at-the-top to warm-at-the-bottom spread, the cold spots are clogged areas. To rid the cooling system of clogged areas of rust and scale and sediment any one of many products on the market are recommended to be used as directed, followed by

CONTINUED ON PAGE 89



Skilled Workmen... Precision Machines...



the first requisites in the manufacture of quiet, efficient air compressors. Illustrated are a few of the workmen and special purpose machine tools fulfilling these requirements in the production of Par Air Compressors.

Par Compressors are engineered and manufactured especially for the automotive service field . . . in 16 models—8 horizontal, 8 vertical, from ½ h.p. to 1½ h.p. single stage units and 1½ h.p. to 5 h.p. two stage units. There's a proper-size, proper-type Par unit to handle practically every "air-power" requirement in the automotive field.

See your Par Jobber for details or write direct for Par Catalog No. 47.

By Comparison—You'll Buy PAR

LYNCH CORPORATION

Par Compressor Division

TOLEDO 1, OHIO U.S.A.



"But I tell you I don't HAVE any second name."

Announcing the **NEW**

AUTO-LITE

Resistor

SPARK PLUG



Revolutionary

AUTO-LITE

Resistor

SPARK PLUG

*PRODUCTION
NOW UNDERWAY...*

*CONTACT YOUR
JOBBER SALESMAN*



IGNITION ENGINEERED BY IGNITION ENGINEERS

AUTO-LITE LEADS AGAIN WITH A SENSATIONAL NEW SPARK PLUG

Here's what it is

The many benefits which can be obtained through a wider than standard spark gap setting are well known to the automotive industry.

Up to this time the rate of spark gap increase due to electrode erosion has been such that the desired wide setting has not been generally used.

Auto-Lite, working with leading car and truck manufacturers, has Ignition Engineered a built-in 10,000 Ohm Resistor which reduces electrode erosion so that Auto-Lite Spark Plugs can now be given this wider gap setting desirable for improved operation and economy.

Here's what it does

PROMOTES SMOOTHER IDLING, because the wider spark gaps help eliminate occasional missing.

REDUCES MISFIRING due to lean spots in carburetion.

ASSISTS IN BURNING OF LEANER MIXTURES for improved engine economy at idle and throughout the speed range.

REDUCES RING AND CYLINDER WEAR when lubrication is washed away by gasoline not burned as a result of occasional misses.

INCREASES ELECTRODE LIFE up to 200% and more.

SUPPRESSES SPARK PLUG INTERFERENCE with radio, radio-telephone, radar and television reception.*

*Within 35 mv/m from 540 kc to 150 mc. at 50 ft.

Advantages so significant they are expected to affect the entire industry...

The many advantages of the new Auto-Lite Resistor Spark Plug with built-in Resistor have been demonstrated in tests by Auto-Lite Ignition Engineers in cooperation with major automotive manufacturers. Wide-spread applications may be expected in the near future, so definite are the improvements this development makes in radio suppression as well as in engine performance and economy.

A complete line of Auto-Lite Resistor Spark Plugs with the built-in Resistor will soon be available for original equipment and for replacement on popular makes of cars, trucks and tractors. The regular line of Ignition engineered Auto-Lite Spark Plugs, which has won such an enviable reputation for dependability of performance, will continue to be manufactured. Money Cannot Buy Better Spark Plugs. (Patented in U.S.A.)

85¢
LIST

Spark Plugs

BIGGEST STORY

TOLD BY AUTO-LITE

In a BIG way!



Full half-hour Auto-Lite radio show stars Dick Haymes over 156 CBS stations. Beams Auto-Lite Resistor Spark Plug story to 34,000,000 homes coast to coast Thursday nights.

COAST-TO-COAST RADIO



This big, colorful Auto-Lite Spark Plug advertising reaches over 23,000,000 Sunday Rotogravure, American Weekly and Parade reading families. Another profit packed market.

SUNDAY NEWSPAPERS



Color pages in magazines like Saturday Evening Post, Collier's, Look, Country Gentleman, Farm Journal, Progressive Farmer and Successful Farming will feature Auto-Lite Spark Plugs to over 18,000,000 car owner homes.

MAGAZINES and FARM PAPERS



Metal tie-in signs, window trim, wrapper plan, training film in technicolor by Walt Disney Productions, counter displays, famous "Plug-Chek"... business builders that pack a wallop!

POINT OF SALES PROMOTION

Cooling System Troubles

CONTINUED FROM PAGE 84

flushing and pressure back-flushing. (By removing the lower hose and reversing the direction of flow). If these methods fail to clean the radiator, the radiator and tanks must be removed and the boiling or rod-insertion method of cleaning applied.

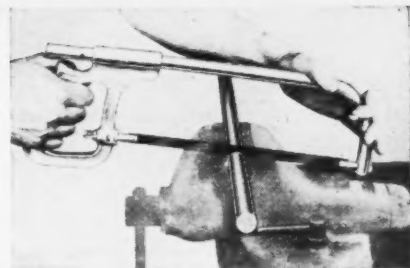
When the cooling system is in good operating condition and ready for summer, add a rust inhibitor. Also a good preventive point is that if, during engine overhaul or other reasons the radiator might be expected to be empty for a long time it should be plugged with rubber stoppers and filled with water so that it will not dry up inside and form scale which later will circulate when water is added and clog the system. There is also a device on the market now which is inserted in the upper hose to help prevent scale formation in the system.

In conclusion, it should be noted that there are other possible causes of overheating, such as using the wrong thermostat with the wrong anti-freeze. Also late timing, improper carburetor adjustment, improper lubrication, tight engine, overloading, dragging brake and other mechanical defects may cause overheating even when the cooling system itself is in good operating condition.



M-13 Rigid Hacksaw By Machine Rebuilding

In volume production at the Machine Rebuilding Company, Detroit 7, Mich., is the Rigid Hacksaw Frame, originally designed for their own machine shop. The important feature of this product is said to be its strong construction, obtained by the one-piece steel tube back fitted into the machined cast-aluminum handle. This the man-



ufacturer claims, permits tightening the blade to high tension, which maintains true alignment.

For more information use coupon on page 65.

V-8 VALVE JOBS MADE EASY!

with *Johnson*
**ADJUSTABLE
TAPPETS**



Do the job right! Install Johnson Adjustable Tappets in Ford and Mercury V-8's (85-100 HP engines).

You need no expensive shop equipment. You can make installations in half the ordinary time and without the task of fitting valves.

Special spanners, included with each set of tappets, leave both hands free for quicker and more accurate adjustments.

Patented Johnson Self-Locking Tappet Screw maintains its original setting for many thousands of miles.

The millions of Johnson Tappets in use today are giving dependable service and providing smooth, quiet engine performance.

You'll find that you will make larger profits and gain more satisfied customers when you install Johnson Adjustable Tappets.

SEE YOUR JOBBER

Johnson **PRODUCTS INC.**
MUSKEGON, MICHIGAN
"Tappets Are Our Business"

Servicing Speedometers • CONTINUED FROM PAGE 45

higher speed is indicated. If there is any tendency to drag, the trouble is inside the head. If it turns freely, the head is probably O.K.

The casing should be checked from one end to the other. Straighten any sharp bends by relocating clamps or elbows and replace the casing if broken or rough.

Before replacing the cable spread a thin coat of specially prepared grease over two-thirds of the cable and insert cable starting at the end of casing. Always check cable for kinks. Hold the two ends in your hands with cable looped down in front of you. Slowly turn cable. If it is kinked the loop will flop, in which case it should be renewed.

GO... TOPPER NO. 2

SUPERGO Condensers have 3 PLIES of insulation—one ply MORE than regular—50% greater insulator efficiency to insure longer life and resistance to punishing shocks and jolts.

with SUPER GO

GO PLACES IN MOTOR TUNE-UP

Here is a golden opportunity to favor your Tune-Up jobs with heavier duty, super performance parts that are precision-built for exact fits—and easier installation. Ask your jobber to serve you with SUPERGO Automotive Ignition. It will prove to be your best buy in "Tune-Up Parts." Wells Mfg. Corporation, Fond du Lac, Wisconsin.

QUALITY TELLS . . . DEMAND WELLS

WELLS
Automotive Ignition

M-14 Two-Ton Curb Type Jack Offered by J. B. Co.

The J. B. Mfg. Co., Detroit 12, Mich., announces their new two-ton, four-wheel, curb type jack. Much trouble is said to be eliminated by the use of vertical valves throughout. Other fea-



tures are ball bearing swivel wheels, roller bearing back wheels, and palmetto V-type packing with O-ring follower, designed to prevent leaking or air binding. For servicing the hydraulic unit only four bolts need be removed. The manufacturer states that all jacks are tested beyond rated capacity. Weight of jack is 70 lbs.

For more information use coupon on page 65.

MOTOR SALES



"But, when the time comes when you do wish to purchase a car, bear in mind—"

"Snap-on Tools

speed our service
and repair jobs . . ."

says Frank Willoughby, Service Manager
of the Bury Motor Co., Philadelphia.



Service Managers throughout the country insist on two things . . . *speed* in turning out service and repair jobs . . . and the

type of *quality craftsmanship* that keeps their customers thoroughly satisfied. Frankly, these are the same reasons why service managers welcome the regular calls of the Snap-on field man. He supplies the tools that mechanics like to use . . . good tools . . . versatile tools . . . with the design, balance, finish, fit, feel and construction that make them a pleasure to hold and to use. They're the type of tools that provide the incentive for turning out the kind of a job that keeps customers happy.

Snap-on tools are easy to own . . . easy to buy. They're available everywhere through 40 direct factory branches employing over 700 trained field representatives.

For 28 years, Snap-on's
Direct-to-User Tool Service
has proved to be

**"The Time-Saving Way
to Buy Time-Saving Tools"**

Snap-on Tools

THE CHOICE OF BETTER MECHANICS



SNAP-ON TOOLS CORPORATION

8036-E 28TH AVE., KENOSHA, WISCONSIN

International Division: Kenosha, Wis., U. S. A.

Mr. Zinnafix CONTINUED FROM PAGE 63

urging the reader to bring his car into Carlson and Simpson, Inc. Identity was maintained, however, by the use of their name and border.

The two column by seven inch ads are currently running weekly in each of the three San Diego daily newspapers. To keep production cost to a minimum, the

bear was drawn so that one piece of art work could be used to illustrate different situations. The copy changes with each ad—and the ad changes its subject each week.

This well-planned small ad campaign has found a faithful and enthusiastic audience—as evidenced by the numerous com-

ments of people who follow it week after week. The ads have also kept the Carlson and Simpson, Inc. name before the public—and subsequently have aided in maintaining the company's competition position in the local field. The firm's salesmen have also found the ads to be a helpful tool in promoting new wholesale business as well as keeping up the interest of old accounts. Too, this continuous campaign has found a receptive audience among the shop employees—certain phrases of the ad copy have found their way into "shop talk".

A contest was held recently by Westerlund to have the newspaper readers select a name for the bear. The winning name was "Mr. Zinnafix" with the originator receiving a cash prize.

To promote the contest, a paper mache head of the bear was made and worn with a full bear costume. It was used in the California Milk Ship parade and is available now for other civic functions.



GREEN BAR SOAP

It's Safe, It's Economical

IT'S SOAP

for use on

Car and Truck Bodies
Walls and Woodwork

Floors (can't harm the finest finish)
Wash Rooms

Poreclain Fronts

HARCO GREEN BAR SOAP is the result of 30 years' experience in the Soap and Cleaning Compound Industry. Make this know-how work for you and your customer. Contact your supplier, or write us direct for further details of the complete HARCO line.

Also manufacturers of HARCO

GREASEOFF — CARBOSOLVE — CAR WASH — DRIVEWAY CLEANER

HARLEY SOAP COMPANY

Philadelphia 37, Pa.

KEEP THE BUSINESS CLEAN



"Things sure ran well at the office today—Mr. Kim after me ALL day!"

**You can stake your reputation
on *PERFECTION!***

**PERFECTLY MATED
for PERFECT
PERFORMANCE**



PERFECTION RING GEARS and PINIONS are perfectly mated, lapped and packed in sets for absolute accuracy and efficiency in service. Every tooth is carefully burnished to literally "pre-wear in" the gear and pinion right in our plant. They fit perfectly . . . synchronize to "no tolerance" exactness . . . provide long-lasting, smooth performance.

The high standard of Perfection quality requires the finest alloy steel, heat treating under scientific control, precision accuracy in manufacture, and continuous checking to final service tests. Over 28 years of producing the highest quality automotive replacement parts has made Perfection widely accepted as the standard of highest quality.

There is a Perfection jobber near you. He carries a representative stock of these quality parts and is prepared to render prompt, efficient, friendly service. If you do not know his name, write us.

PERFECTION GEAR COMPANY, HARVEY, ILL.



PERFECTION PRODUCTS INCLUDE:

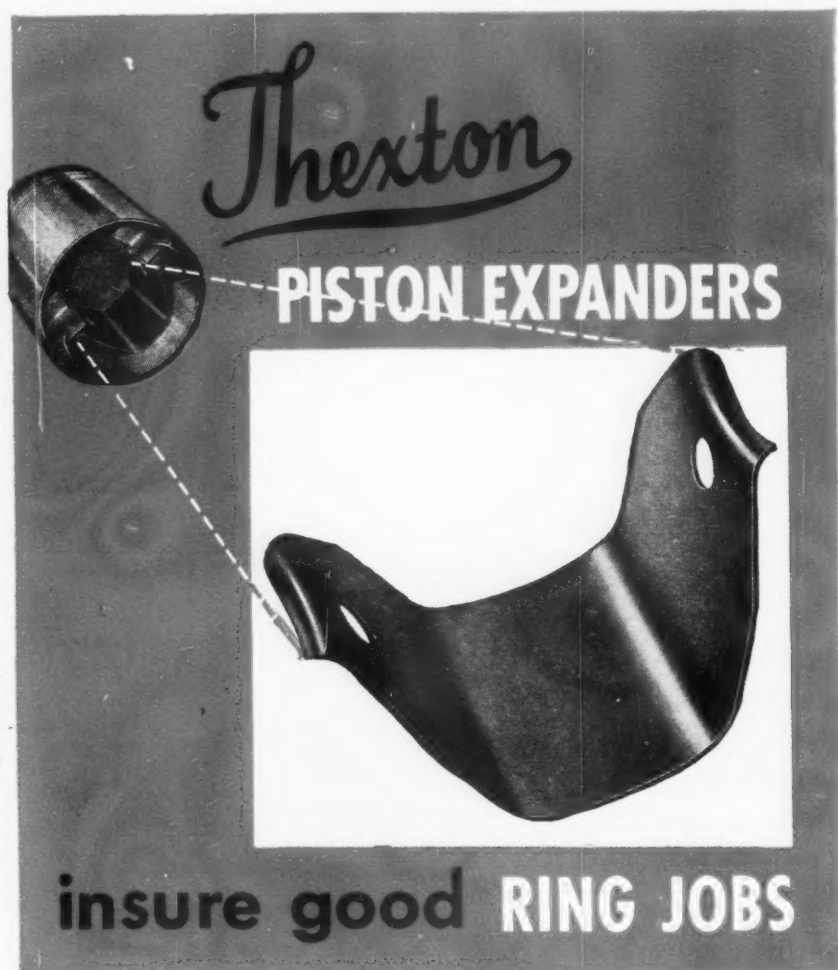
Silent Timing Gears, Metal Timing Gears, Silent Timing Chains, Transmission Gears and Parts, Differential Ring Gears and Pinions, Differential Cases and Parts, Fly Wheel Gears, Cylinder Heads, Clutch Plates, Pressure Plates, Clutch Cover Assembly Parts, Clutch Forks and Parts, Clutch Rebuilders.

technique in their baseball telecasts. Also, the program can be interspersed with short spot announcements on services and products, whenever the opportunity presents itself, such as between innings, or during a short lull, when the interruption would not be objectionable to the audience.

The Thornton-Fuller organization feels that this has been very productive advertising and has given definitely traceable results. These results have taken the form of persons calling up and inquiring about the advertising, and persons coming into the shops for service and products offered on television. In one in-

stance, the morning after a Dodge truck commercial, one of the viewers wanted to purchase two of the trucks he had seen on the previous night's telecast.

Certainly television is in the "crystal set" stage, but it is not in the infancy stage as far as selling is concerned. It does offer comparatively low cost advertising to an intent audience interested in what the dealer has to offer. For this reason, if for no other, it should be considered as a powerful means of advertising.



Thexton
PISTON EXPANDERS
insure good RING JOBS

**CURVED LIP, SLIDING ON PIN BOSS,
COMPENSATES FOR VARIATION IN HEAT
EXPANSION SO THAT THE PRESSURE
IS CONSTANT AT ANY TEMPERATURE**



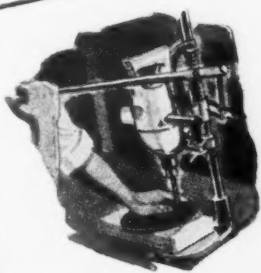
Thexton **MANUFACTURING CO.**
1313 Winter Street, Minneapolis 13, Minn.
Products the mechanic knows and trusts

M-15 Concrete Flooring For Heavy Traffic Use

A concrete floor treatment for heavy traffic conditions on garage, automotive showroom and filling station floors has been developed by W & W Auto Finishes, Inc., Boston 15, Mass. The manufacturer has two new products to offer, Traffic Primer and Rubber-Floor Anti-Skid Floor Enamel. Traffic Primer is a silicated full rubber base coating which is brushed on the concrete. It is said to increase the longevity of the top coating by 14 to 16 times over any other floor material known. Rubber-Floor Anti-Skid Floor Enamel, which is applied over the Traffic Primer for maximum resistance to traffic, or used by itself where traffic resistance is not of prime importance, is a 60 per cent rubber-base and dries in an hour. Alcohol, gasoline, and most chemicals are said not to affect the material. It is available in eight colors plus black and white.

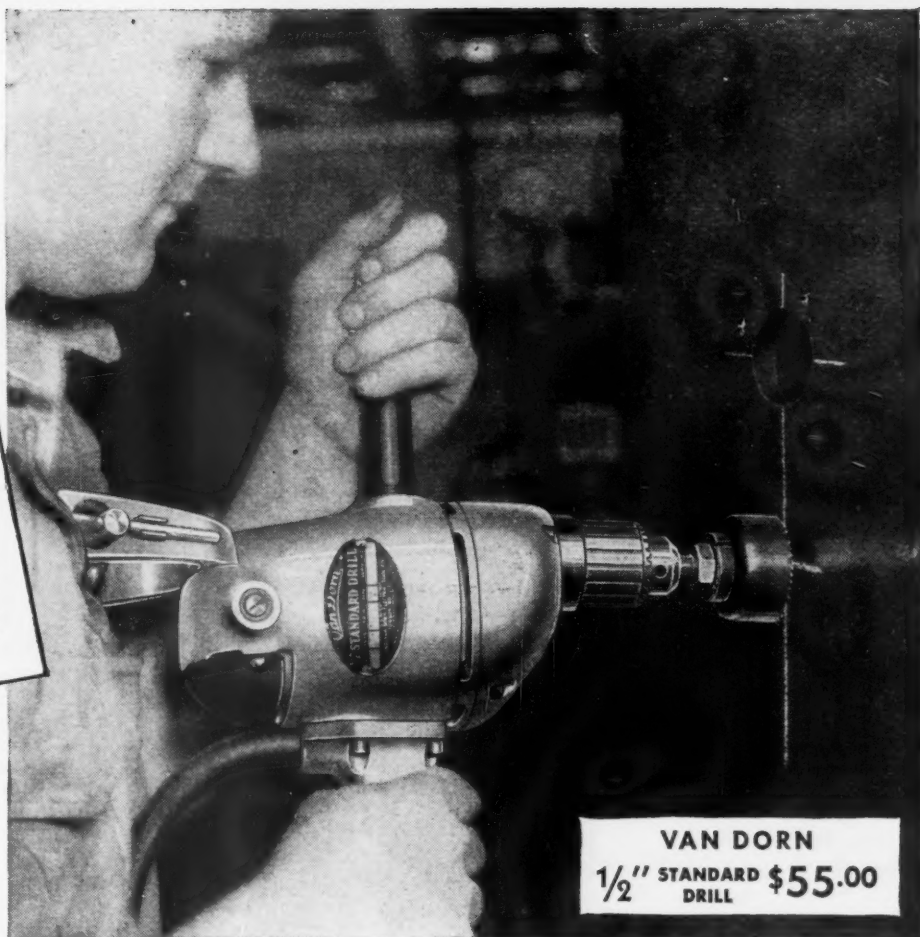
For more information use coupon on page 65.





DOUBLES AS DRILL PRESS!

Mounted in a Van Dorn Drill Stand, this Drill makes a powerful drill press. Plenty of leverage for tough drilling. Smooth, positive feed helps on precise work. One-hand operation makes it easier to guide work.



VAN DORN
1/2" STANDARD \$55.00
DRILL

Power

for Speedy, Timesaving Automotive Repair Drilling!

For drilling bolt holes, cutting clean, round holes for heaters, drilling out broken bolts and studs and many other jobs like these—there's no better tool than this speedy Van Dorn 1/2" Standard Portable Electric Drill! It's specifically designed for just such *intermittent* service. And you have ample power for these jobs without the unnecessary weight of a heavy-duty production tool.

The heart of this 1/2" Standard Drill is a husky Van Dorn-built motor, "tailor-

made" for this specific tool; to provide the right power, the correct torque at the proper speed; for driving twist drills, wood augers and hole saws. There's "a drill for every job" in the big Van Dorn line—ranging from 1/4" to 1 1/4" capacities, in *Standard* and *Heavy-Duty* models. Ask your near by Van Dorn Distributor for complete details. Write today for free catalog to: The Van Dorn Electric Tool Co., 727 Joppa Road, Towson 4, Maryland.

Are Your TOOL ACCESSORIES Up to Par?

You're missing a bet if you don't keep your electric tools equipped with fresh accessories. They can often mean the difference between good and mediocre performance. Don't slow up your shop. Check your hole saws, twist drills, sanding discs, grinding wheels, buffing and polishing pads, wire brushes and valve reconditioning stones, pilots and wheels today. Then call your nearby Van Dorn Distributor for replacements.

FOR POWER SPECIFY

"Van Dorn"

(DIV. OF BLACK & DECKER MFG. CO.)
PORTABLE ELECTRIC TOOLS



YOU CAN STILL ENTER

LOOK AT

IT'S EASY TO ENTER!

Simply add the last line to the jingle in the coupon below and mail it in according to the rules. Get your family in on it. Mail in as many suggestions as you wish. Your jobber has all the additional entry blanks you need. Try your skill today! Remember . . . \$1,500.00 ain't hay!

**BE SURE TO
FOLLOW THESE
SIMPLE RULES**



**AND HERE'S AN
ENTRY BLANK TO MAKE IT** *Easier*

SIMPLY ADD LAST LINE TO THIS JINGLE AND MAIL IN, ACCORDING TO THE RULES, WITH TOP FROM LEAK-PROOF BOX.

*LEAK-PROOF are the rings for me
They make the job like new
And customers will all agree*

NAME.....

ADDRESS.....

CITY.....ZONE.....STATE.....

JOBBER'S NAME.....CITY.....STATE.....

1. Complete last line of jingle to rhyme with new. Mail entry with box top from set of LEAK-PROOF Piston Rings, or reasonable facsimile, to the Lloyd Herrold Company, 333 West Lake Street, Chicago 6, Illinois. Enter as often as you wish, using either official entry blank which you can get from your jobber, or plain paper. Be sure to send in LEAK-PROOF box top, or reasonable facsimile, with each entry.

2. Contest is open until midnight June 30, 1948. Entry to win any of prizes must be post-marked before midnight June 30, 1948 and received by July 10th.

3. Entries will be judged by Prof. Lloyd D. Herrold of Northwestern University. Decisions will be final. Duplicate prizes in case of ties. You accept these conditions when you send in entry. Entries, contents and ideas therein become property of the McQuay-Norris Mfg. Co.

4. Winners will be notified by mail. To secure winning list, enclose self-addressed stamped envelope.

5. Contest is open only to repair shop operators—mechanics and their families.

McQUAY-NORRIS

Have you tried your SKILL in the

\$5,100⁰⁰

LEAK-PROOF JINGLE CONTEST
Yet?



**FIRST
\$1,500**

THESE PRIZES

**THIRD
\$100**

133 CASH PRIZES

**SECOND
\$250**



PLUS

130 ADDITIONAL \$25.00 PRIZES

Try Your Skill Today!

MANUFACTURING CO., ST. LOUIS, MO.

Your *fastest-moving* lines

You don't have to guess which automotive products will take the lead in sales this year.

They're the products that jobbers and dealers prefer to handle—products backed by advertising in The Saturday Evening Post.

Post advertising pages are read and believed by every member of the family. They're the leaders in every community, the people you can count on for steady, profitable business.

They know and prefer the key lines they meet in the advertising pages of their favorite magazine.

AUTOMOBILE AND AUTO

Acme Air Appliance Company, Inc.
A. C. Spark Plug Division,
General Motors Corporation
Allis-Chalmers Manufacturing Co.
American Chain & Cable Co., Inc.
American Coach Co.
American Octanator Corporation
American Hammered Piston Ring Div.,
Koppers Company, Inc.
Anderson Company, The
Armstrong Rubber Company, The
Atlas Press Company
Auto-Life Battery Corporation,
Subsidiary of The Electric Auto-Life Co.
Autopulse Corporation

Bear Mfg. Co.
Belden Mfg. Co.
Bell Company, Inc., The
Bendix Aviation Corporation
Black & Decker Mfg. Co., The
BMC Manufacturing Corp.
Bonney Forge & Tool Works
Borg-Warner Corporation
Bowers Battery & Spark Plug Co.
Bowes "Seal Fast" Corporation
Breakstone & Company
Bright Star Battery Company
Buckeye Iron & Brass Works
Buick Motor Division,
General Motors Corporation
Burd Piston Ring Company
Burgess Battery Company
Butler Engineering Co.

Cadillac Motor Car Division,
General Motors Corporation
Carter Carburetor Corporation
Division of American Car & Foundry Co.
Casco Products Corp.
Casite Corp., The
Caterpillar Tractor Co.
Central Equipment Company
Champion Spark Plug Company
Chevrolet Motor Division,
General Motors Corporation
Chicago Streamlite Corporation
Chrysler Corporation
Chrysler Sales Corporation
Continental Oil Company
Cooper Tire & Rubber Co.
Cristy Chemical Corp.
Crosley Motors, Inc.
Cushman Motor Works, Inc.

Delco-Remy Division,
General Motors Corporation
De Soto Motor Corporation
DeVilbiss Company, The
Diamond T Motor Car Co.
Dieterich Products Corp.
Dodge Car Division, Chrysler Corporation
Dodge Truck Division, Chrysler Corporation
Duo Coach Corporation
du Pont de Nemours &
Company, Incorporated, E. I.

Travel the **POST** road!

AND AUTOMOTIVE AFTERMARKET ADVERTISERS IN THE SATURDAY EVENING POST

Eaton Mfg. Co.
 Edelmann & Co., E.
 Electric Auto-Lite Company, The
 Electric Storage Battery Co., The
 Enjay Company, Inc.
 Ethyl Corporation
 Federal-Mogul Service
 Division of Federal-Mogul Corp.
 Firestone Tire & Rubber Co., The
 Fisher Body Division,
 General Motors Corporation
 Risk Tire Company, Division of
 United States Rubber Company
 Ford Motor Company
 Frum Corporation
 Freeman & Freeman, Inc.
 Huehuf Trailer Company
 Fulton Company, The
 Gabriel Company, The
 General Electric Company
 General Motors Corporation
 General Tire & Rubber Co., The
 Gostex Products, Inc.
 GMC Truck & Coach Division,
 General Motors Corporation
 Goodrich Company, The B. F.
 Goodyear Tire & Rubber Co., The
 Great Northern Research Laboratories, Inc.
 Grizzly Manufacturing Company
 Guarantee Products, Inc.
 Guide Lamp Division,
 General Motors Corporation
 Gulf Oil Corporation
 Hammer Blow Tool Co.
 H & H Products Mfg. Co.
 Hastings Manufacturing Company
 Heat Division, DeMert & Dougherty, Inc.
 Heil Co., The
 Higgins, Incorporated
 Hollingshead Corporation, R. M.
 Hudson Motor Car Co.
 Hull Mfg. Co.
 Indian Motorcycle Co., Division of
 Rogers Diesel and Aircraft Corp.
 International Harvester Co.
 International Mfg. Co.
 International Parts Corporation
 James Industries, Inc.
 Kaiser-Frazer Corporation
 Kelly-Springfield Tire Co., The
 Kendall Refining Company
 Kib Manufacturing Co.
 Kwik-Stik Mfg. Co., The
 Rubber & Tire Corporation
 Lincoln Division, Ford Motor Company
 Kalle Corporation
 Kelsey Co., Harley C.
 Kibaid Company
 Kiron, Incorporated
 Macmillan Petroleum Corporation

Mall Tool Company
 McQuay-Norris Mfg. Co.
 Mercury Division, Ford Motor Company
 Miller Rubber Co., Division of
 The B. F. Goodrich Company
 Minnesota Mining and Mfg. Co.
 Monroe Auto Equipment Company
 Moog Industries, Inc.
 Motorola, Incorporated
 "M" System Manufacturing Co.
 Muskegon Piston Ring Co.
 Nappanee Trailer Company
 Nash Motors, Division of
 Nash-Kelvinator Corporation
 National Battery Corporation
 Gould Commercial Division
 National Carbon Company, Inc.,
 Unit of Union Carbide and
 Carbon Corporation
 New Departure Division,
 General Motors Corporation
 New York Lubricating Oil Co.
 Noblitt-Sparks Industries, Inc.
 Octa-Gane
 Oldsmobile Division,
 General Motors Corporation
 Packard Motor Car Co.
 Palace Corporation
 Park Chemical Company
 Parker Rust Proof Company
 Peckat Manufacturing Co., Charles
 Pennsylvania Grade Crude Oil Association
 Pennsylvania Refining Co.
 Pennsylvania Rubber Company
 Pennzoil Company, The
 Perfect Circle Company, The
 Petersen Mfg. Co.
 Philco Corporation
 Phillips Petroleum Company
 Plastic Finish Company
 Platt Trailer Co., Inc.
 Plomb Tool Company
 Plumb, Inc., Fayette R.
 Plymouth Division, Chrysler Corporation
 Polaroid Corp.
 Pontiac Motor Division,
 General Motors Corporation
 Porte Mfg. Co., Inc.
 Power Brake Parts Mfg. Co.
 Power-Pak Products, Inc.
 Publicker Industries, Inc.
 Purolator Products, Inc.
 Pyrene Manufacturing Company
 Pyroil Company
 Quaker State Oil Refining Corp.
 Radiator Specialty Co.
 Ramsey Corporation
 Rankin Mfg. Co.
 Raybestos Division
 of Raybestos-Manhattan, Inc.
 Ray-O-Vac Company
 Reading Batteries, Inc.
 Reo Motors, Inc.

Saftcycles, Inc.
 Schrader's Son, A. (Div. of
 Scovill Manufacturing Co.)
 Schull Corporation
 Sealed Power Corporation
 Seiberling Rubber Company
 Servicycle Western Corporation
 Shakeproof, Inc., Division of
 Illinois Tool Works
 Shaler Company, The
 Shell Oil Company, Inc.
 Simonix Company, The
 Sinclair Refining Company
 Socony-Vacuum Oil Company, Inc.
 South Wind Division,
 Stewart-Warner Corporation
 Standard Oil Co. of California
 Stewart-Warner Corporation
 Studebaker Corporation, The
 Texas Company, The
 Thomas A. Edison, Incorporated
 Tide Water Associated Oil Co.
 Timken Roller Bearing Co., The
 Trailer Coach Manufacturers Assn.
 Trico Products Corporation
 Tri-Pak Gun Kit, Inc.
 Trippe Manufacturing Co.
 Truckstell Co., The
 Tucker Corporation
 Turk Corp., C. K.
 Union Oil Company of California
 United Motors Service,
 Div. of General Motors Corp.
 United States Asbestos Division
 of Raybestos-Manhattan, Inc.
 United States Rubber Company
 U. S. Industrial Chemicals, Inc.
 Vagabond Coach Mfg. Co.
 Vulcan Manufacturing Co., Inc.
 Wagner Electric Corporation
 Walker Manufacturing Company
 of Wisconsin
 Ward Products Corp.
 Warner-Patterson Company
 Wayne Pump Company, The
 Weaver Manufacturing Company
 White Motor Company, The
 Whizzer Motor Company
 Wilkening Manufacturing Co.
 Willard Storage Battery Company
 Willys-Overland Motors, Inc.
 Winchester Repeating Arms Co.,
 Division of Olin Industries, Inc.
 Wind Turbine Co.
 Wix Accessories Corp.
 Wolf's Head Oil Refining Co., Inc.
 "X" Laboratories, Inc.
 Zecol, Inc.

**Your best customers
 know and prefer Post-
 advertised products.**

Independent Pneumatic Opens New Building

Independent Pneumatic Tool Company, manufacturers of Thor portable power tools, announces the opening of a new administration building adjacent to its main works at Aurora, Illinois.

The building will accommodate Thor's entire executive and administrative staff, the major

portion of which was transferred to Aurora from Chicago for consolidation with other office divisions previously located within the Aurora works. The company's Chicago sales branch will retain temporary headquarters at the former general office address, 600 West Jackson Boulevard, until construction of a new branch office building is completed sometime in the fall.

The new administration build-

ing provides office space involving an area of 40,000 square feet on two floors and additional space for machine shop, factory and steel storage of 35,000 square feet.

M-16 Vari-Products Offer Folding Tripod Flare

Vari-Products Co., Chicago, Ill., announce their new product, Vari-Flare, a small, folding tripod, mounting two "hot-red" Lucite lenses nearly $3\frac{1}{2}$ in. in diameter. These lenses, the man-



ufacturer asserts reflect over 17 candle power and can be seen a full half-mile in the lights of approaching night traffic. The tripod will also hold a folding staff red flag about 12 inches square, for daylight use. One Vari-Flare folds into a bag which will fit into the glove compartment. A complete truck set of three flares and flags folds into a sheet metal case $3\frac{1}{2}$ in. square and $8\frac{1}{2}$ in. long.

For more information use coupon on page 65.

Pick The Winners

Answers to Quiz on page 43

You can find the following 16 winners in the letter box: 1—Harroun, 1911; 2—Dawson, 1912; 3—Goux, 1913; 4—Thomas, 1914; 5—Resta, 1916; 6—Wilcox, 1919; 7—Milton, 1921, 1923; 8—Souders, 1927; 9—Meyer, 1928, 1933, 1936; 10—Keech, 1929; 11—Arnold, 1930; 12—Frame, 1932; 13—Shaw, 1937, 1939, 1940; 14—Roberts, 1938; 15—Robson, 1946; 16—Rose, 1947.

For MORE profits for SAFER brake jobs
INSIST ON
Ready to Install
BUNDYFLEX
RIGID METAL HYDRAULIC BRAKE LINES



Original Equipment on Every Car and Truck since 1935

90% OF ALL REPLACEMENTS
can be made from this new, fast-selling

No. 475 DEALERS DISPLAY ASSORTMENT

Handle those urgent hydraulic brake line jobs promptly . . . and profitably with Bundyflex ready-to-install brake lines. No more hunting for the right tubing or fittings; no more tube cutting or flaring. In a few minutes, you've duplicated the original installation with one of the 6 popular numbers from your handy Bundyflex assortment.

Extra long lines easily made with EVERHOT 300C $\frac{1}{4}$ F x $\frac{1}{4}$ F inverted flare union.



BOTH ENDS DOUBLE-LAP FLARED WITH FITTINGS ATTACHED

LIST PRICE EACH **\$14.80** DEALER PRICE EACH **\$9.85**

ORDER FROM YOUR JOBBER TODAY

EVERHOT PRODUCTS CO.
 2001-9 W. CARROLL AVE., CHICAGO 12, ILLINOIS
 1511 W. SEVENTH ST., LOS ANGELES 14, CALIFORNIA

"Save a life"
CHECK YOUR BRAKE LINES
 REPLACE WITH
BUNDYFLEX HYDRAULIC BRAKE LINES
Made Stronger to Last Longer
 EVERHOT PRODUCTS CO., CHICAGO 12, ILL.

DOUBLE WALL
TIN COATED
COPPER LINED



ATTRACTIVE METAL SIGN & WALL RACK
 Free with Each Assortment. Contains 4 each of 6 popular types and lengths.

Repainting

CAN BE
YOUR BIG PROFIT OPERATION



Sell More Customers—Satisfy them Better ...with this Complete Showroom Paint Shop

More than one and three quarter million cars were completely refinished in 1947. Over six million more received major and minor touchup jobs. And repainting volume this year is far surpassing last. Big profits await car dealers and body shops equipped to handle this business.

Here is a revolutionary new paint shop that actually sells more paint jobs because it makes a forceful sales demonstration of every painting operation. The glass observation bay invites visitors to watch the fascinating spray process and the high quality methods you employ to give old cars "new car beauty".

Your DeVilbiss distributor will gladly explain how this completely balanced paint shop with its dustproof spray booth, scientific illumination, cross flow ventilation and complete assortment of spray equipment will help you handle more paint jobs better—faster—more profitably!

THE DEVILBISS COMPANY • Toledo 1, Ohio

Canadian Plant: WINDSOR, ONTARIO

These four essentials
comprise the
Complete Package
Paint Shop

1. **A Spray Booth**...providing adequate exhaust, scientific illumination and positive dust protection.
2. **An Assortment of Spray Equipment**...for factory quality results on all kinds of jobs with any spray material.
3. **An Adequate Air Compressor**...to provide ample low cost air for all paint shop and service requirements.
4. **Hose and Connections**...designed and built specifically for spray painting service.

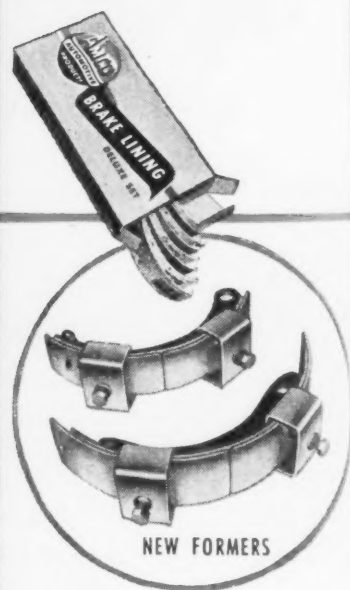
DE VILBISS

means Quality in all four..



SPRAY EQUIPMENT
EXHAUST SYSTEMS
AIR COMPRESSORS
HOSE & CONNECTIONS

NOW!!



DE LUXE BRAKE SETS
 MOLDED & WOVEN LINING
 CLUTCH FACINGS
 HOSE • CAR MATS
 FAN BELTS

FOR THE FIRST TIME . . .

the Magic of Infra-Red is YOURS for NEW Brake Service Profits!

with **UNI-FUSE BONDING** by **AMCO**

TWO OPPORTUNITIES to get in on PLUS-PROFITS

- **INFRA-RED**, the Miracle Heat that Bonds Brake Lining in 10 to 12 Minutes!
- **CONVECTION**, a Brand New Oven with Money-Saving, Money Making Features!

Here's your Magic Carpet to a real Plus-Profit Brake Service Business! First announced by AMCO 7 years ago, Bonding of Lining is now in the limelight to stay. It is the *BIG NEW* development in brake service. With the AMCO Uni-Fuse Process, you'll be in on the ground floor of this fast-growing market; you'll get a BIGGER SHARE of the Bonding Business.

AMCO offers you a choice of two BRAND NEW Uni-Fuse PROCESS Ovens, using Infra-Red or Convection heat. Both are complete set-ups with the latest developments in formers and equipment. Either

outfit will get you started immediately in this wide-open NEW field of Brake Bonding! Uni-Fuse Ovens are of an exclusive design, perfected to save you operating and maintenance dollars while working for you quickly and simply to get each bonding job out in a hurry . . . in fact, the INFRA-RED type bonds 3 TIMES FASTER than conventional methods! Come along on the Magic Carpet to Plus-Profit Brake Service; get into BRAKE BONDING NOW, because "BONDING IS HERE TO STAY." Ask for full particulars from your AMCO Jobber or write Asbestos Mfg. Co., Dept. E-4, Huntington, Indiana.

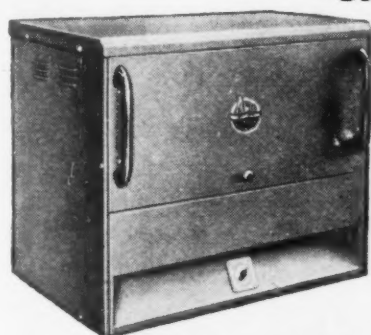
Bonding is not just a current "craze" . . .

These are some reasons WHY BRAKE BONDING IS HERE TO STAY:

- **CAR FACTORY TREND IS DEFINITELY TOWARD BONDING**—many manufacturers of cars and trucks are already using it!
- Absence of rivets **ADDS ABOUT 10% TO THE EFFECTIVE BRAKING AREA OF THE LINING!**
- Tested even in taxi service, users report **DRUMS ARE NEVER SCORED, NEED NOT BE TRUED UP.**
- **LINING CAN BE BONDED TO ANY BRAKE SHOE.**
- **BONDING INCREASES LINING LIFE!** Bonded lining can be used until there is only seven-thousandths of an inch left!

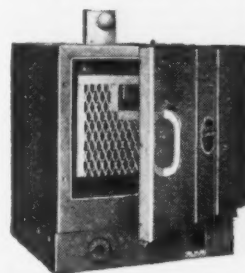
R-2667

UNI-FUSE INFRA-RED OVEN



- Bonds Brake Lining in from 10 to 12 minutes— $\frac{1}{3}$ the time needed by conventional type ovens.
- No Pre-heating—always ready for immediate use!
- AMCO Uni-Fuse (patented) tape with crude rubber base, provides cushioning member between lining and shoe, prevents hard pedal and noise.

UNI-FUSE CONVECTION OVEN



- Improved Insulation keeps all the heat in, saves electric bills.
- Specially-designed door also prevents heat escape.
- Removable tray and grill.
- Special basket in which shoes can be piled.
- Safety Signal Light tells operator when the process is completed.

AMCO

Uni-Fuse

BONDING

ASBESTOS MANUFACTURING COMPANY HUNTINGTON, INDIANA

Uni-Fuse BULLETIN FREE!

Please send us WITHOUT COST OR OBLIGATION your comprehensive bulletin on the AMCO Uni-Fuse BONDING PROCESS.
Asbestos Mfg. Co., Dept. E4, Huntington, Ind.

NAME _____

ADDRESS _____

CITY _____

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Suskana*... SARAN

... for auto seat coverings

SMART a wide range of bright and colorful patterns

DURABLE . . . SUSKANA Saran is strong, supple and will
not fray or scuff

WASHABLE . . . with soap and water or cleaning fluid

SUSKANA Saran . . . always looks bright and spic and span



SUSQUEHANNA MILLS, INC., 404 Fourth Ave., New York 16, N. Y.

*SUSKANA fabrics for Auto Seat Covers,
Upholstery, Men's wear, Women's wear, Neckties



CANDIAN

SARAN

BY NATIONAL

Made For Wear . . . Styled For Sales.

Wherever fabric beauty must be practical, *Saran* is the answer. Here, in the newest seat covers, are color and beauty that will withstand rain, sun and rugged usage. *Saran* won't snag, sag or scuff . . . providing seat covers that always look new. And, too, this amazing fabric permits the easy removal of surface dirt and dust. That's why *Saran* is the first choice in seat covers for motorists everywhere.

Think of the sales opportunities that *Saran* seat covers can open for you! Here are beauty and color inherent in the fabric itself—in an eye-catching assortment of weaves and patterns—with a wearability story that is really a stopper. You can build new sales by joining the swing to seat covers made of *Saran*, a great name in modern textiles. Ask your supplier today!



REG. U.S. PAT. OFF.

THE
National plastic products company

ODENTON • MARYLAND

New York: Empire State Building • Los Angeles: Bankers Building

SARAN

SARAN BY NATIONAL denotes monofilament, rattan and tape manufactured by The National Plastic Products Company from Dow's *Saran*, and supplied to mills, weavers and other fabricators.

*What Shock Absorber Line
Provides All types for all cars*

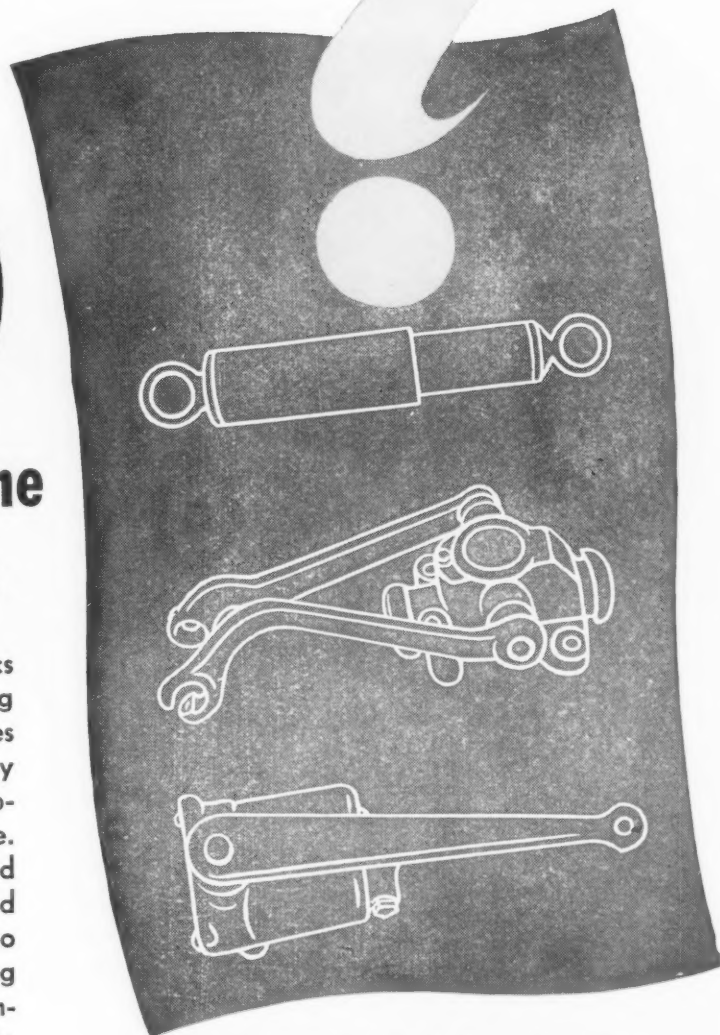
DELCO

The Only Complete Line of Shock Absorbers

Knee-action shocks . . . double-acting shocks . . . single-acting shocks . . . direct-acting (airplane type) shocks! Delco alone makes available the right type of shock for every make of car. Delco alone offers original-equipment leadership throughout a complete line. Delco alone has 65,000,000 units on the road to assure a "live" market for service and replacement. And the big news is that Delco Shock Absorbers, with all these outstanding advantages, are sold at a price that is competitive with even the "bargain" lines. Take advantage of Delco leadership . . . one line, one quality, one price. Build for the future with Delco Shock Absorbers.



DELCO SHOCK ABSORBERS
A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS



FIRST IN COMFORT . . .
FIRST IN ACCEPTANCE!



DELCO

HYDRAULIC SHOCK ABSORBERS

miser truck engine, this vehicle carries 6.00 x 16 four-ply tires. Three-speed transmission is supplied with steering-post remote control gear shift. Four-speed transmission and overdrive transmission are optional equipment. The rear axle is of semi-floating type with hypoid drive. Front and rear springs are longer. Shock absorbers on the front and rear are standard. Brakes are self-adjusting and self-centering. Pick-up and stake bodies are 6½-ft. long.

THREE-QUARTER TON — Maximum gross rating of 6,100 pounds, powered by the Studebaker Econ-o-miser engine. Eight-foot pick-up and stake bodies. The extra-heavy truck-type full-floating rear axle has a spiral bevel drive. Rear springs are wider than those on the half-ton and have one extra leaf which increases the normal load capacity by 250 pounds. Transmission is the same as on the half-ton.

ONE-TON — The 121-inch wheelbase model has a maximum gross rating of 7,800 pounds and carries eight-foot pick-up and stake bodies. The 131-inch wheelbase model has a maximum gross rating of 10,000 pounds

and carries a nine-foot stake body. Like the three-quarter ton truck it has the Econ-o-miser engine. Four-speed transmission is standard. Front axle capacity is larger than before. Lockheed hydraulic front brakes are used. Rear brakes are Wagner Hi-Tork hydraulic.

ONE AND ONE-HALF TON

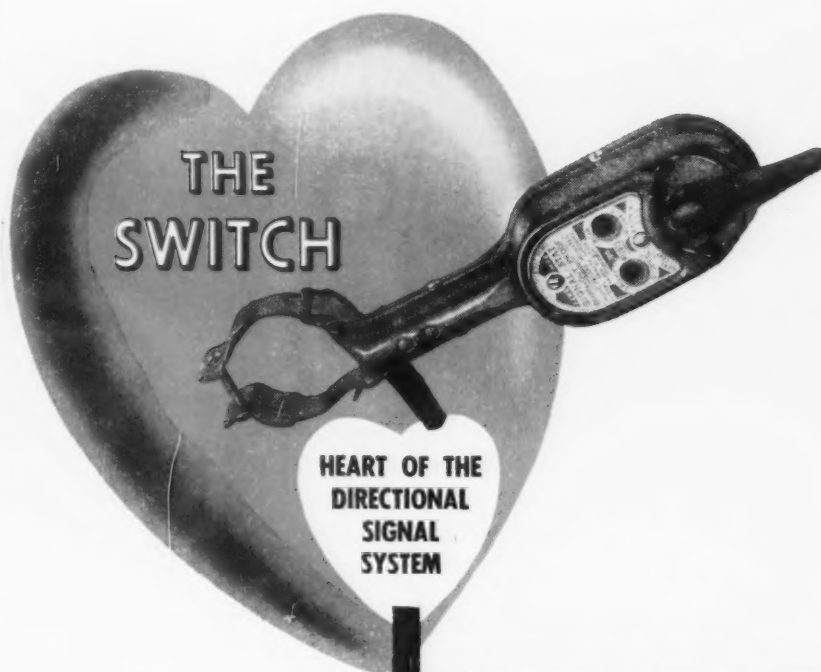
— This series has a maximum gross rating of 14,000 pounds and uses the Studebaker six-cylinder Hy-Mileage engine. Cooling system capacity is increased by 2½ quarts to 15½ quarts. The front axle is heavier than in the previous model. Turning radius is reduced. Front and rear shock absorbers are available at extra cost.

TWO-TON — With a maximum gross rating of 16,000 pounds

CONTINUED ON PAGE 108



"Dear Aunt Evelyn! Imagine my surprise when I opened the birthday gift you sent me!"



It's
SIGNAL-STATS
Wherever
You
Turn!

Your NEW Signal-Stat catalog sent gladly upon request

A Directional Signal System is only as reliable as the Switch that controls it!

For absolute, maximum dependability, it's SIGNAL-STAT's Burn-Out-Proof SWITCH No. 700.

- ◆ UNCONDITIONALLY GUARANTEED
- ◆ BURN-OUT-PROOF
- ◆ TELLTALE PILOTS
- ◆ PATENTED CIRCUIT
- ◆ SIMPLE INSTALLATION
- ◆ TESTED and APPROVED (A.A.M.V.A. — STATE — S.E.M.A.)

SIGNAL-STAT DIRECTIONAL SIGNAL LAMPS

Worthy team-mates of No. 700 Switch . . . their range is complete . . . available in complete sets, or as individual replacements.

ALSO AVAILABLE IN CHROME TRIM

SIGNAL-STAT >

CORPORATION

DIRECTIONAL SIGNALS • DIRECTIONAL SIGNAL SWITCHES • "FUSE-IN-LINE" UNITS

SIGNAL-STAT BLDG.

1430 HERKIMER STREET

BROOKLYN 33, N. Y.

Studebaker Trucks . . . CONTINUED FROM PAGE 107

this series uses the Studebaker Hy-Mileage engine. Extra-heavy full-floating rear axle with hypoid drive is standard. Heavy-duty frames are reinforced by fishplates. Both the two-ton and one and one-half ton models are available with 9, 12 and 14-foot stake bodies.

Engines remain unchanged

from the standpoint of mechanical specifications and are the same as listed in Automotive Industries, March 15, 1948. The engine on the 1½, ¾, and one-ton models is six-cylinder, 3-in. bore x 4-in. stroke, 170 cu. in. displacement, rated 80 hp at 4000 rpm with compression ratio of 6.5 to 1. The engine in the 1½

and 2-ton models is six-cylinder, 3-5/16 in. bore x 4¾ in. stroke, 226 cu. in. displacement, rated 94 hp at 3600 rpm with compression ratio of 6.5 to 1.

Cab comfort is an impressive feature, one of the foremost items being an ingenious ventilating system. Air scoops located at the grille pick up fresh air and pass it under the hood through insulated metal tunnels built in the fender aprons. The flow of air is controlled by foot-operated sliding panels in the firewall.

An exclusive truck heater and defroster unit, the Truck Climatizer (an extra cost item), can heat fresh air during cold weather, providing living-room comfort and ventilation throughout the cab at all times. No stale air is reheated to be used again. A blower forces the air into the Truck Climatizer and defroster vents while regulation of window wings adds to their effectiveness. Controls for the blower, heat

CONTINUED ON PAGE 110

The Biggest Opportunity in Automotive Service

**Over \$13.00
PER CAR**

Over \$13.00 per car — that's how much brake service the average car needs*, but car owners don't know it!

What an opportunity to promote SAFETY, CONSERVE CARS and get more work from every car you service.

Just remember that more than half the cars need brake service of some kind. That's why it pays to pull a wheel and inspect brake linings, drums and the hydraulic system. You find needed repairs and are able to show car owners why their brakes need service. Just try it!

*See Nationwide Survey reported in Brake Progress News or write us for a copy.

Gatke **BRAKE LININGS**
CUSTOM-BILT
BLOCKS SETS ROLLS SHEETS
GATKE CORPORATION
236 N. La Salle St., Chicago 1, Ill.



GATKE Extra Value Increases Opportunity

GATKE Grooved Brake Lining gives you countless advantages to clinch brake re-line sales.

The Grooves eliminate extraneous matter and keep surfaces clean for more effective braking contact. They attract attention and excite interest. Give you extra value to talk about that car owners can see and appreciate.

Even more important, they give performance results other brake lining cannot duplicate.

Ask your GATKE Jobber or write.



"They're only three for a quarter. The ladies' is a very worthy cause and . . . !"

Delco "PACKAGED PROFITS" now offers



Most popular models in Delco Home Radio now grouped for best display, quickest turnover!

Here's a great opportunity to pep up your radio sales and step up your radio profits! You can now purchase Delco Home Radios in carefully selected "profit packages"—each with a brilliant new display stand which holds six models.

Pick your package

Take your profit

Each Delco is a quality product, backed by three great names: General Motors, Delco and United Motors. And the complete Delco line is so diversified that it attracts a wide range of prospects. Talk to your United Motors' distributor (or write to United Motors Service, General Motors Building, Detroit 26, Michigan) . . . select one or more of these new "profit packages" . . . you'll find you're in business to make money!

DELCO PACKAGE NO. 1502

Twenty-four assorted Delco table model radios, including one combination radio and record player and one display stand.

DEALER'S PROFIT.....\$249.67

DELCO PACKAGE NO. 1504

Fifteen assorted Delco console and table model radios and radio-record player combinations and one display stand.

DEALER'S PROFIT.....\$298.12

Ask about other "Profit Packages" not listed here

DELCO RADIO

A GENERAL MOTORS PRODUCT

Delco radios are distributed nationally by United Motors Service. See your United Motors distributor about the Delco Radio line.



Studebaker Trucks CONTINUED FROM PAGE 108

regulator and defroster are conveniently located on the instrument board.

Advanced construction of the cab provides the driver with more space than he has ever enjoyed. Besides increased head room, four more inches of hip space are available so that three adults can ride in comfort.

Greatly expanded glass area increases visibility by 23 per cent.

Additional comfort features include the favorably located steering wheel; a back support which automatically adjusts itself to the "fore and aft" positioning of the seat cushion; generous elbow and knee room, and the chair-height type of seat

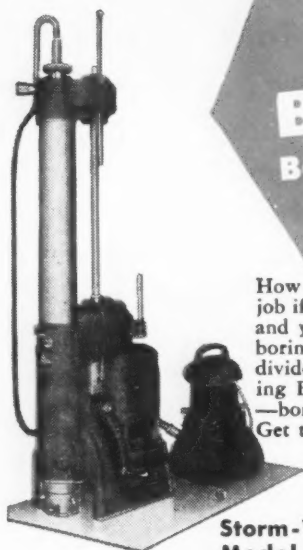
with comfortable springs; and combination cross and variable ratio steering which eliminates wheel "fight" and kick-back.

The new radiator grille is heavily constructed for greater strength while the blended fenders are heavier as well as wider. There is greater resistance to impact in the heavy channel-type steel front bumper which attaches directly to the frame side rails. Sealed beam headlights and parking lights are set into the fenders.

Structural frame changes on the new trucks bring the cab lower, making it easier for the driver and occupants to get in and out. There are no outside running boards.

Doors are wider and have a check stop to hold them in open position. Latches are of the rotary type, which automatically adjust for stress and wear. Hardware throughout is heavier. Standard equipment includes hood ornament, dual windshield wipers and sun visors, arm rests, ash tray and a reading and entrance light which operates automatically as the door is opened. Hill-holder is available as optional equipment on all models.

DOUBLE *your* PROFIT ON Every PISTON and RING Job



**Storm-Vulcan
Model 260-V**

Boring Bar: Bores from 2.2" to 4.7". Travel, 12". Weighs only 116 lbs. 1/3 H.P. motor. No. 300 Vacuum Unit sucks out loose material as bar operates.

Storm-Vulcan builds 7 models; diameter capacities from 2.2" to 7.7".

STORM-VULCAN, Inc.

2104 Commerce Street
DALLAS, TEXAS

1312 5th Street South
MINNEAPOLIS, MINNESOTA

STORM-VULCAN
One-Cut Precision
BORING BARS
Bore without ridge or taper
... no honing necessary

How much more can you make on a "ring" or "piston" job if you also sell a precision reboring job? Figure it out and you'll see that a Storm-Vulcan high-speed cylinder boring bar will pay you handsome profits... PLUS extra dividends in customer service and satisfaction! These Boring Bars are really outstanding in precision performance—bore to a tolerance of .0001"—and are easy to operate. Get the complete story from your jobber... or write us.

taking the country
Buy STORM

STORM-VULCAN, INC. 3-58

2504 Commerce Street, Dallas 1, Texas

Please send me literature on Storm-Vulcan cylinder boring bars.

Name _____

Address _____

City _____

State _____



"Just listen to that motor purr now!"

THE IDEAL COMBINATION

For Better Business!



Here's a team that can't be beat! Genuine Toledo Parts—you—and your Toledo Distributor; all working together for better business! Genuine Toledo Parts—none finer in all the world. Your mechanical skill in using these parts, in turning out fine, precision work. And your Toledo Distributor, offering you his services to build up *your* business. Take advantage of this unbeatable combination to make more profits in 1948.

Your Toledo Distributor carries a complete line of parts for *all* makes of cars. He extends you friendly credit. He provides expert machine shop service to handle "out-of-shop" work. He will gladly advise you on the right tools and equipment for your shop. He gives you business

tips, advises you on successful merchandising programs. And he offers you all these services under one roof!

Get in on this business-building team. Use Toledo Parts... use the services of your Toledo Distributor to increase your repair business in '48!

The **TOLEDO**
STEEL PRODUCTS COMPANY

TOLEDO, OHIO, U. S. A.

Since 1906—Makers of Fine Automotive Parts



LEGALLY SPEAKING

All Partners Are Liable For Illegal Act of One

Two Georgia brothers were in partnership in an auto parts and used car business. One of them, acting on behalf of the partnership, bought a trailer from a seller who did not own it. Thereafter, when the real owner sued him to recover possession of the

trailer, the argument was made that he never had it in his possession individually, but only on behalf of the partnership. Therefore, he pleaded, judgment in the suit should not be entered against him personally.

The other partner had no hand in withholding the trailer from the real owner. In fact, it did

not appear that he even knew about the transaction. Could he or the partnership be held liable?

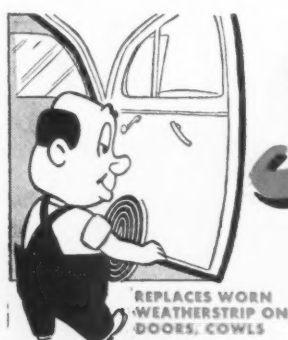
Answering this question by explaining the law of partnership liability, the Georgia Court of Appeals said:

"A partnership and each member thereof is liable for an unlawful act (not a crime) committed by a co-partner acting within the scope of the firm's business, and that liability is not dependent upon personal participation in the wrongdoing by the other members of the partnership. In the case before us the partnership and the two partners were liable for the wrong committed by the one partner in the conversion of the plaintiff's trailer, and the plaintiff had the right to sue all three of them, or any one of them, and especially to sue the partner who actually committed the wrong.

"The undisputed evidence disclosed that he committed the wrong, not as an individual, but as a partner and agent of the partnership and, necessarily, that in doing so he was acting within the scope of the firm's business."

When a partner commits an unlawful act in the course of the partnership business, it may be both a crime and a so-called civil wrong for which the victim may obtain financial redress. The other partners ordinarily wouldn't be liable criminally un-

CONTINUED ON PAGE 114



3 MORE WAYS TO GIVE CUSTOMER SERVICE with DOR-TITE sponge-rubber strip

Dor-Tite eliminates squeaks and rattles in new and used cars—weatherstrips doors, cowls and trunks. Provides a resilient cushion between surfaces. Compresses to one-half normal thickness where the fit is tight—remains expanded where opening is large, to seal the car against dust and drafts.

Dor-Tite is self-sealing, self-adhering and it "stays stuck." Its patented fabric back, bonded to the sponge-rubber body, prevents stretching during application, prohibits creeping and loosening.

Keep Dor-Tite on hand for anti-draft, anti-squeak service on your customers' cars. It's extra service they'll appreciate.

Dor-Tite is available in many widths and thicknesses. Ask your jobber about the special Dor-Tite assortment number 1224.

"STAYS STUCK"



DURKEE-ATWOOD CO. Minneapolis 13, Minn.

DOR-TITE

MOTOR SALES



"I see some salesmen are keeping their hand in."

IT'S
HERE!

NEW MOPAR

Cyclebond

SUPER-LIFE BRAKE LINING



New MOPAR
Cyclebond
Brake Lining
offers ...

UP TO 75% LONGER LIFE!

MOPAR Cyclebond Lining, being minus rivets, can be worn *almost completely through its entire thickness!*

MORE EFFECTIVE BRAKING!

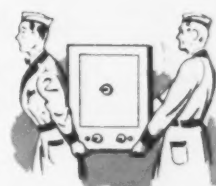
Its unbroken surface means greater braking area ... *more actual braking surface to contact the drum.*

GREATER ECONOMY!

Drum scoring is practically eliminated, since dirt and grit rarely collect on its unbroken surface. *Less scoring means less drum truing.*

... and a new type of brake service!

Plymouth, Dodge, De Soto and Chrysler dealers are offering a new type of brake service with a new kind of MOPAR brake lining.



It's the new MOPAR Cyclebond Brake Lining—the super-life lining for bonding to brake shoes!

This is in addition to the MOPAR Brake Lining Sets (with rivets) which are also available.



Many of these dealers can serve you today! They are providing themselves with stocks of MOPAR Cyclebond Brake Lining for Chrysler Corporation-built vehicles. Many already have, and more will obtain, factory-approved equipment for bonding linings to shoes.

Dealers so equipped are now in a position to offer you a *new* brake service by bonding MOPAR Cyclebond Brake Lining to brake shoes.



Contact your nearest Plymouth, Dodge, De Soto or Chrysler dealer today for complete details.

CHRYSLER CORPORATION • PARTS DIVISION • DETROIT 31, MICHIGAN



Factory Engineered and Inspected for

**PLYMOUTH • DODGE
DE SOTO • CHRYSLER CARS
DODGE "Job-Rated" TRUCKS**

less they took part in the act, but would be liable for financial redress to the injured party. Examples of such acts, which may be both crimes and civil wrongs are fraud, libel, assault and battery, false arrest, malicious prosecution. (*Peach vs. Salmon*, 38 *Southeastern Reporter*, second series, 302).

Many States Still Hold Sunday Contract Invalid

Beware of Sunday contracts! The Supreme Court of Mississippi recently pointed out that, in that state, a contract entered into on Sunday is invalid. Many other states have a similar "Sunday rule."

In the Mississippi case Arm-

strong seized certain equipment from Shell. The equipment belonged to Armstrong, but Shell claimed he was entitled to hold and use it under the terms of an oral contract he had made with Armstrong. Admitting that the contract was made on Sunday, Shell argued that Armstrong was equally at fault with him in making a Sunday contract and could not now take advantage of the illegality.

But the Supreme Court of Mississippi did not see it that way.

"It is admitted," said the court, "that the contract was begun, negotiated and entirely concluded on Sunday. That rendered the contract invalid and unenforceable. Armstrong is not equally at fault with Shell because he is not attempting to enforce the contract. Shell, not Armstrong, is grounding his right on the contract in trying to enforce it. Judgment for Armstrong." (*Armstrong vs. Shell*, 26 *Southern Reporter*, 2nd series, 344).

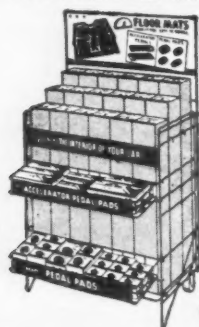
The Buyer Should Protect Himself By Bill of Sale

The importance of having the buyer of a car sign a written contract setting forth the price and all other pertinent information is illustrated by a recent Louisiana decision. In the sale

CONTINUED ON PAGE 116

New! Fast Selling! Profit Making!
COMBINATION DEAL
 on Floor Mats, Pedal Pads and Display Merchandiser

Featuring Full-Molded CONTOUR FLOOR MATS
 Here's a deal that fits right into your profit picture — especially NOW. Armor-Flex Contour Floor Mats add new beauty to old interiors, open up a big new market for you. And the complete line of Armor-Flex Pedal Pads and Accelerator Pedals fill practically every customer request for all make and model cars.



...and the new Display Merchandiser!

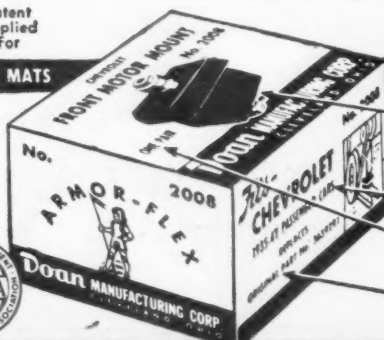
Doubles your sales, doubles profits. Holds 18 floor mats, 36 pairs pedal pads, 19 accelerator pedals. Compact, portable, rolls on wheels at rear. Ideal for salesrooms, service stations, garages, etc. It's easy to double your business with the new Doan Display Merchandiser.

Write for descriptive folder TODAY.

MOTOR MOUNTS — FLOOR MATS

All ON ONE PACKAGE

All TO HELP YOU SELL



PEDAL PADS

- Illustration of Part
- Diagram showing where Part fits
- Make of Car and Year
- Number Required Per Car
- Original Part Number

Doan MANUFACTURING CORP. • CLEVELAND 12, OHIO



"I'm just explaining contour plowing to this gentleman!"

*Every cork gasket you need
in new "JOB PACKAGES"*

VICTOR
GASKETS AND OIL SEALS



GASKETS

Now you can get Armstrong-Victor Cork Gaskets in new, handy "Job Packages." Each package contains all the gaskets needed for a specific repair job. You don't get held up on the job because a needed gasket was missed when you ordered from your jobber.

Armstrong-Victor "Job Packages" are available for all popular makes of cars, busses, trucks, and tractors. Every gasket meets the manufacturer's original equipment specification. And these new "Job Packages" are wax-lined to keep the gaskets fresh and flexible.

Order Armstrong-Victor Cork Gaskets in the new "Job Packages" today. Your jobber can fill your needs quickly. See for yourself why it pays to say "Armstrong-Victor" when you buy cork composition gaskets.



LOOK FOR THE TWO NOTCHES



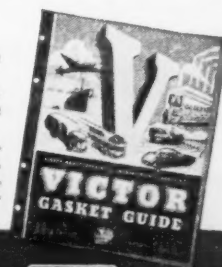
Exclusive Armstrong-Victor Replacement Gasket Trade-Mark

VICTOR GASKET GUIDE

Victor publishes the most comprehensive Gasket Guide compiled—contains:

1. Factory numbers with Victor numbers.
2. Special indexing where there are numerous motor models.
3. Markings to show gasket set contents.
4. Up-to-date gasket popularity ratings.

Victor Manufacturing and Gasket Company,
5750 Roosevelt Road, Chicago 90, Illinois.



Armstrong-VICTOR



CORK COMPOSITION GASKETS • CORK SHEETS

Legally Speaking CONTINUED FROM PAGE 114

of a car by one individual to another, the buyer paid \$300 in cash. Later the seller, a woman, sued him for \$150, which she said was the balance due on the purchase price of \$450. The buyer claimed that \$300 was the full purchase price.

No receipt was given for the money, and no formal writing

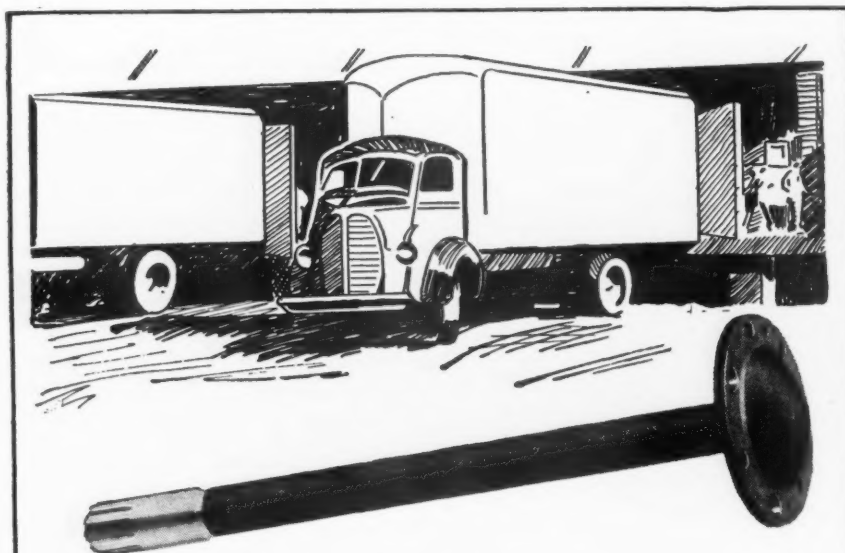
was given or requested. Moreover, there were no witnesses to the sale.

The only evidence offered by the seller was the testimony of a woman friend who said that she interviewed the buyer when the car was delivered to him and that he at first admitted he owed and agreed to pay the balance of

\$150, and afterwards denied and refused to pay it.

The trial court decided in the seller's favor, and this decision was upheld by the Louisiana Court of Appeal, who said:

"The transaction seems most peculiar and unbusinesslike, particularly since the buyer is the proprietor of a business and is an official of an insurance company. We see no reason to disturb the trial court's decision in favor of the seller." (*Payne vs. Foster*, 26 *Southern Reporter*, 2nd series, 237).



TOUGH U.S. AXLES . . . cost-wise
truckers use 'em for 3 good reasons—
Fewer breakdowns. Less maintenance expense.
Types & sizes for 'most any truck on the road.

Ask your Jobber.

Free! New Catalog. Contains listings
of U. S. heavy duty replacements for Army
Surplus trucks. U. S. Axle Co., Inc., Pottstown, Pa.



Owner or Renter Must Keep Property Safe

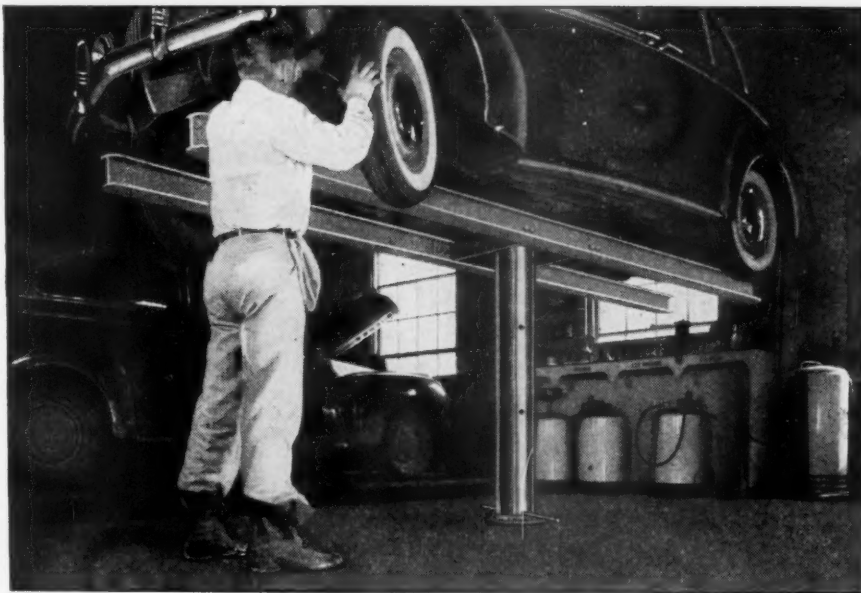
Most repairmen are careful to see that their shops are safe for customers and employees. However, there are other classes of business visitors for whose safety the proprietor may also be liable, as was shown in a recent Pennsylvania case. There the business building contained an elevator, which was being repaired by an employee of the elevator company. During the course of the repairs, an employee of the business firm occupying the building called up the shaft for the use of the elevator. The man repairing the elevator, while endeavoring to comply with this request, was killed by an unattached radiator

CONTINUED ON PAGE 118



"I won, now it's your turn to crawl over the net and congratulate me."

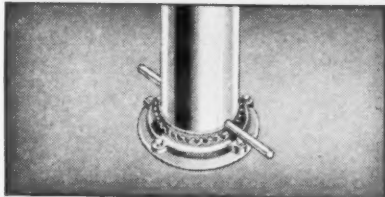
More Lift **VALUE** 16 Times Over!



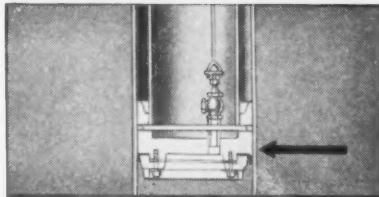
FIRST CHOICE OF THE INDUSTRY

You get so much *more* in a Globe Hoist . . . at least 16 exclusive features which make Globe first choice for service, economy, easy operation, proven performance. Be sure to see the new Globe Catalogue before you buy a Lift. Ask your Jobber, or write either address below.

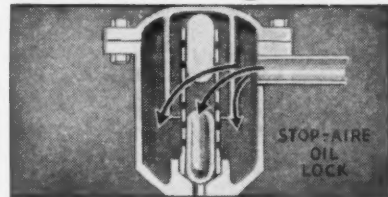
Some of Globe's 16 Added Advantages...



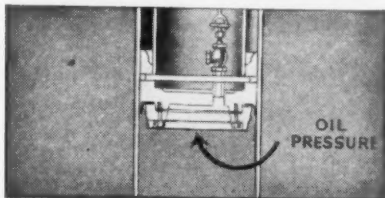
TEMPORARILY NON-ROTATING Steel bar through plunger locks Hoist in any direction.*



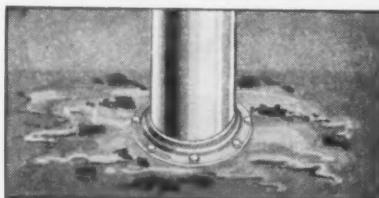
TRAVELING LOWER BEARING Handles off-center loads without binding. Greater distance.



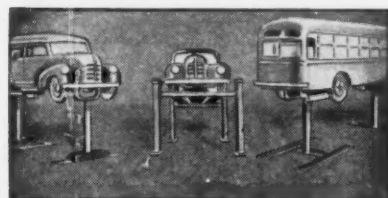
TRIPLE SAFETY Oil-controlled lowering speed. Stop-Aire Oil lock. Visible, through-plunger safety rod.†



LESS POWER REQUIRED Hydraulic force applied BELOW Piston. Precision engineering.



FOR CAR WASHING Patented wiper seal protects against water, dirt.†



WIDER CHOICE America's most complete line of Lifts. Choose for your exact needs.

*Piston-seal design.
†Surface-backed design.

GLOBE *Auto* HOIST

THE "BEST" LIFT . . . SAFER, SMOOTHER, QUICKER

GLOBE HOIST COMPANY, Philadelphia 18, Pa. • Des Moines 6, Iowa

AMERICA'S MOST COMPLETE LINE OF HYDRAULIC AND ELECTRIC LIFTS . . . AUTOMOBILE, BUS, TRUCK, DOUBLE-DUTY, INDUSTRIAL

falling into the open side of the elevator cage.

In the subsequent suit by the administratrix of the dead man's estate, a verdict for the death was rendered against the firm occupying the building. On appeal to the Supreme Court of Pennsylvania, one of the questions discussed by the Court was

the liability of the occupant of the business building for the safety of persons who are neither employees nor customers.

"The duty owed deceased by the defendant," said the Court, "was that owed by an owner or occupier of land to a business visitor or invitee. The class of persons qualifying as business

visitors is not limited to those coming upon the land with a purpose directly or indirectly connected with the business conducted thereon by the possessor, but includes as well those coming upon the land for a purpose connected with their own business which itself is directly or indirectly connected with the purpose for which the possessor uses the land, as for example a workman who comes to make alterations or repairs on the land used for such purposes. But whether the deceased, while engaged in repairing defendant's elevator, is to be regarded as a business visitor or as a mere gratuitous licensee, makes no difference in this case. In either event the law imposed upon the defendant business firm the duty either to exercise reasonable care to disclose to the deceased dangerous conditions known to it and not likely to be discovered by him, or to make such conditions reasonably safe."

Discussing the hazard presented by the radiator, the Court continued:

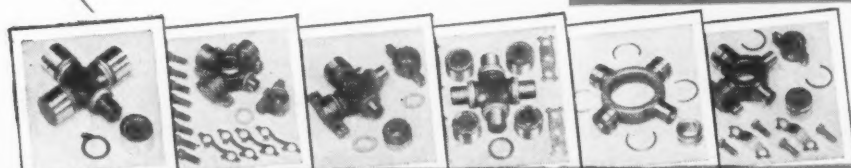
"That the topheavy, unattached radiator weighing 100 pounds placed by the defendant against the wall in close proximity to the entrance into the elevator shaft, involved a recognizable risk of serious bodily harm to any person likely to come in contact with it, is a matter on which reasonable minds

CONTINUED ON PAGE 120



We always use Neapco
UNIVERSAL JOINTS AND PARTS
 "... it's a good line—
 services all our calls!"

New England Auto Products Corp.,
 Pottstown, Pa.



Neapco-Spicer Neapco-Mechanics Neapco-Detroit Neapco-Cleveland Neapco-Ford Neapco-Chevrolet

America's Most Complete Independent Line



"I know offices have them, but you're not exactly in an office, Jackson!"

You're sure to make a sale . . .
if you use these words:

WOLF'S HEAD

IS THREE STEPS AHEAD

EXPERTLY CONTROLLED DEWAXING

keeps Wolf's Head
free-flowing.



DOUBLE DISTILLING
makes Wolf's Head richer,
tougher, more heat resistant.



TRIPLE FILTERING
removes all free carbon and
other troublesome impurities.



TELL car owners why you recommend Wolf's Head Motor Oil. Take time to tell them the difference. Explain that Wolf's Head is superior because it has been refined *three steps further* than ordinary motor oils. And don't forget to say that Wolf's Head is 100% pure Pennsylvania, premium grade . . . refined from only the finest Pennsylvania crude. This easy little sales talk will bring car owners back to you asking for Wolf's Head . . . every time they need oil. Wolf's Head Oil Refining Co., Inc., Oil City, Pa., New York 10, N.Y.



100% Pure Pennsylvania—"Premium Grade"



P.G.C.O.A. Permit No. 6

could not differ. Placed in such a manner as to indicate in all respects that it was a well-secured, firmly attached unit of the building's heating system, it was not such an obvious defect as even a gratuitous licensee would be bound to notice. It constituted a hidden menace to life and limb

which the defendant business firm was obliged either to make safe or disclose. Failing to do it is liable for the bodily harm caused thereby, whether deceased be regarded as a business visitor or gratuitous licensee." (*Straight vs. Goodrich*, 47 *Atlantic Reporter*, 2nd series, 605).

Liability for Used Motor Depends on Warranty

The buyer of a used motor sued the seller to get back the purchase price because the motor proved to be defective. The trial court gave judgment against the seller, but on appeal this was reversed by the Supreme Court of Mississippi.

Pointing out that the liability of the seller of a used motor is not the same as in the case of a new one, the court said:

"The motor was second hand. Therefore, unless there was an express warranty of fitness the buyer cannot recover the purchase price.

"When the used motor was sold the defendant stated that it was in good condition, but that it needed repairs. The buyer took the motor to a mechanic who was unable to make it run. Some months later the buyer returned the motor to the seller's place of business and reported his inability to make it run, but did not demand the return of the purchase price. A few days later he did ask for his money back and, upon refusal, sued the seller.

"There was no breach of any express warranty. Both parties understood that the motor was second hand and needed some repairs, the exact nature of which neither could say with certainty.

CONTINUED ON PAGE 124

The Hope Line for Every Storage Need

HOPE ALL METAL PARTS BINS

Hope all metal bins afford quick, orderly parts department expansion. They are specially designed for automobile parts departments according to the requirements of various auto manufacturers. Patented slip-in shelf dividers snap into position in 3 seconds—no bolts, clamps or screws. The special features of Hope Bins reduces parts handling time.



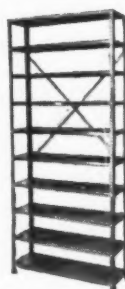
HOPE ALL METAL STORAGE CABINETS

Ideal for safe, dust-proof storage. Reduces petty thievery. Convenient for storage of costly small parts and office supplies. Holes punched on 2" centers for flexible shelf set-up. Available as storage cabinet, wardrobe cabinet or combination of both. Attractive chrome door handles equipped with tamper-proof, grooved key lock. Size: 78" high, 36" wide, 18" or 24" deep.



HOPE ALL METAL COMMERCIAL SHELVING

Designed for efficient handling of package or carton storage, and storage of large, cumbersome parts. Easily adaptable for display purposes. Useful for dead storage. Furnished with cross braces for extra rigidity. Can be furnished with closed vertical uprights for sides. Standard size: 36" x 12" x 84". Other sizes available.



WRITE FOR COMPLETE
INFORMATION
Early Deliveries

Hope Metal Products Company
1507 Rockwell Avenue
Cleveland 14, Ohio



"This was a tough job until I lifted that sign off a truck."

*Here's Your
Chance for*

3 SALES

*Every Time You
Lift a Hood!*

With 3 Great Fram Filters!

YOU GET extra profits, extra repeat business if you sell *all three* Fram Filters every time you lift a car hood. Tell your customers how Fram's *three* Filters give them greater engine protection than ever before possible. Remember, *all three* Fram Filters are the *replacement cartridge type*. Sell *all three* Fram Filters and you have *six chances* for sales of genuine Fram Replacement Cartridges each year . . . because each Fram Filter requires a minimum of *two* replacement cartridges every twelve months!

New Fram Gasoline Filter and new Fram Crankcase Air Filter mean quick profits because cartridges for them can be changed *while car is being gassed*. Famous Fram Filcron Oil Filter is the automotive industry's most efficient Filter . . . brings you repeat business. For greater profits, stock and sell *all three* Fram Filters! Fram Corporation, Providence 16, R.I. In Canada: J. C. Adams Co., Ltd., Toronto, Ontario.

Get under the hood for profits! Ask, "HOW'S YOUR OIL FILTER?" and give customers the Fram Dipstick Test! You'll sell plenty of Filters and cartridges as well as oil, oil changes, fan belts and other accessories.



NEW FRAM GASOLINE FILTER removes both solids and water from gasoline. Protects finely adjusted carburetor mechanisms.



NEW FRAM CRANKCASE AIR FILTER replaces conventional breather caps, "cleans the air your engine breathes!"



FAMOUS FRAM OIL and MOTOR CLEANER, largest selling automotive oil filter, "cleans the oil that cleans the motor!"



FRAM *Oil-Air Gas* **FILTERS**

NEW SEALED POWER

The only ring

TWICE AS MANY SLOTS
FOR FULL FLOW OF OIL

Through ring

Through spring

Through piston holes

GENTLE CURVES

instead of HUMPS

for more flexibility, more
bearing area, longer life

SEALED POWER

SEALED POWER

NATIONALLY ADVERTISED IN:

The Saturday Evening Post, Colliers
Popular Mechanics, Popular Science, Country Gentleman
Farm Journal, Successful Farming,
Progressive Farmers and 2366 weekly newspapers

R MD-50 STEEL OIL RING

g with the FULL-FLOW SPRING

Saves oil!
Restores power!
Builds business!

Sealed Power Franchised Dealers are feeling the impact of Sealed Power's national campaign offering "the new-car feel" to owners of old cars. Car owners want that "NEW-CAR FEEL"—and Sealed Power dealers are making money by meeting that demand. Only Sealed Power has the famous MD-50 Steel Oil Ring, the only ring with the FULL-FLOW SPRING. Cash in on these 6 features:

1. Improved oil economy
2. More spring action for steel segments
3. Leaves all slots and oil holes open
4. Maintains tension for varied groove depth
5. Greater bearing area for longer life
6. Retains original efficiency for life of ring

Sealed Power "x" Sets for all popular cars and trucks feature the MD-50 Steel Oil Ring—the only ring with the Full-Flow Spring. Talk to your Sealed Power Distributor or write SEALED POWER CORPORATION, Muskegon, Michigan. In Canada: Stratford, Ontario.



Sealed Power
PISTON RINGS
BEST IN NEW CARS! BEST IN OLD CARS!

Legally Speaking CONTINUED FROM PAGE 120

This situation, made part of the transaction by an allowance upon the purchase price, made in view of the needed repairs, divests the assurance of good condition of whatever import of warranty it might otherwise have carried. A warranty that a second hand article is in good condition but requires repairs to

restore utility can mean no more than that the article can be made usable by reasonable repair. Moreover, the buyer's acceptance of the motor without inspection or test in full knowledge that repairs would be needed to make it operable, together with his retention of the motor for several months without attempt-

ing to cancel the transaction was inconsistent with any contention that defects existed in violation of some express warranty." (*Voos vs. Lawrence*, 26 Southern Reporter, 2nd series, 172).

An Employer Is Liable For Acts of His Employee

Nobody would try to sell a rebuilt car as new, but that sort of thing occasionally turns up in other lines of business. In Ohio the manager of a jewelry store sold a woman customer a watch which he allegedly represented as new. Actually, it was a rebuilt watch, a new case containing old works.

The watch wouldn't keep time and upon taking it to a watch repairman the customer learned that the works had been made by a manufacturer who had been out of business fifteen years. Moreover, these old works had been repaired by wholly unsatisfactory methods.

The woman took the watch back to the store and demanded either a refund of her money or a new watch. The manager refused to give her either.

She sued the store and got a verdict for the amount she had paid for the watch.

But that wasn't the end of it. She appealed and obtained the right to sue the store for "punitive" damages besides. In plain

CONTINUED ON PAGE 126



BE SAFE . . . BE SURE . . . USE SOL-SPEEDI-DRI

People who use SOL-SPEEDI-DRI—industry's original and foremost absorbent for all liquids—have learned that they can count on the uniformly high quality of SOL-SPEEDI-DRI. They have learned, too, that SOL-SPEEDI-DRI costs less by the pound because it does more work . . . because it is always efficient, always dependable.

Yes, it's quality all the way with

SOL-SPEEDI-DRI . . . quality that assures you cleaner, brighter, safer floors . . . freedom from slips and falls caused by dangerous, slippery surfaces. Obtained by selective mining, laboratory-checked hourly, and processed by the most modern methods and equipment, SOL-SPEEDI-DRI comes to you in special weather-proof bags, every pound at peak efficiency.

WHEN YOU BUY, BE SURE IT'S SOL-SPEEDI-DRI!

Safety and Maintenance Co., Inc.
No. 1 Wall Street
New York 5, N. Y.

Warehouse Stocks Maintained
in Principal Cities of the
United States and Canada.



"Boy! You should hear what we used to tell 'em during the gas shortage."



You May Never Be This Lucky! But . . .

... YOU DO MAKE BIGGER PROFITS

Eight Quick Reasons to Switch to Martin-Senour

- 1** Higher painting profits
- 2** Exact color match to car-maker's specifications
- 3** Top quality, top durability, top beauty
- 4** No time wasted mixing or matching
- 5** Patented pour-top can prevents waste
- 6** No come-backs, no headaches
- 7** Easier to handle... jobs out on time
- 8** Available everywhere... call your N.A. P.A. jobber



Painting the M-S Way

Perhaps our cartoonist *did* overdo it when he heard about the profits made with Martin-Senour's ready-mixed automotive finishes. You might not retire at 30, but you *will* have more time and money every week to do the things you like. You paint more cars in less time and cut labor costs on every job. Every M-S finish is factory matched to the car maker's specifications. No more time wasted mixing colors. No more "comebacks," either, because it's *right* the first time. Just check the color, make and model in your handy M-S catalogue, then phone your nearby N.A.P.A. jobber. It's quick, it's easy and it's always *right*.

MARTIN-SENOUR

2520 Quarry Street, Chicago 8, Illinois

Legally Speaking CONTINUED FROM PAGE 120

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Yes, it's quality all the way with

SOL-SPEEDI-DRI . . . quality that assures you cleaner, brighter, safer floors . . . freedom from slips and falls caused by dangerous, slippery surfaces. Obtained by selective mining, laboratory-checked hourly, and processed by the most modern methods and equipment, SOL-SPEEDI-DRI comes to you in special weather-proof bags, every pound at peak efficiency.

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MARTIN-SENOUR

2520 Quarry Street, Chicago 8, Illinois

Legally Speaking CONTINUED FROM PAGE 124

words, she wanted more than her money back, she wanted financial compensation for the "flagrant" nature of the transaction.

Explaining this, the court said:

"Punitive or exemplary damages may be given in a proper case. It is an established principle of law in Ohio that in suits

to recover monetary redress for wrongful acts involving fraud, malice or insult, the jury may go beyond the rule of mere compensation for the aggrieved party and award punitive or exemplary damages."

The customer's suit was against the proprietor of the store, who had not been present

when his manager made the allegedly false and fraudulent representations about the watch at the time of the sale. Was he liable personally for punitive damages in such circumstances? The court thought not, unless he had either authorized or ratified his manager's fraud. Deciding that the proprietor had by his conduct ratified his manager's act, the court said:


"The fact that an employer retains an employee after knowledge of the latter's wilful and malicious conduct, tends to prove ratification of the employee's act sufficient to support a verdict against the employer for punitive damages.


"The record in this case shows that the store manager who sold the watch to the plaintiff was retained thereafter in the employment of the defendant proprietor."

One of the facts which apparently influenced the court to hold the proprietor liable for punitive damages for his manager's fraud was the evidence that on the occasion of one of the customer's visits to the store the proprietor heard her entire complaint to the manager, but did nothing about it. This seemed to the court inconsistent with his advertised claim to handle only "quality merchandise."

This case serves as a sharp reminder that, generally speaking, an employer is liable for the acts of his employee in the course of his employment. (*Saberton vs. Greenwald*, 66 Northwestern Reporter, second series, 224).

This sign  and this sign 
plus this plaque  will help you

to better business and bigger
profits  in a great nation-wide

public relations program 

for reputable Brake Service Dealers.

Ask your  J-M distributor

for complete details or write



Johns-Manville, Box 290, New York 16, N. Y.



"I guess I didn't need gas after all."

behind these great products...

a great

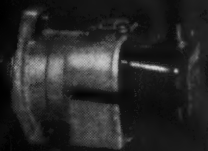
American scientist



- New, Quick-Cooling Aluminum Oxide Insulator with Wider Heat Range.
- Only an Edison has the Patented "SPUN-ON" Leakproof Gasket.



The New Edison
"Extra Heavy Duty"
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EDISON

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Thomas A. Edison, Incorporated
Automotive Division
West Orange, New Jersey

You can always rely on an Edison

FOR MOTOR PARTS

FOR CHASSIS PARTS

FOR DRIVE-LINE PARTS

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FOR PAINT AND BODY SUPPLIES

FOR BEARINGS

FOR UNIVERSAL JOINTS

FOR COOLING AND EXHAUST SYSTEMS

NATIONAL AUTOMOTIVE PARTS ASSOCIATION • DETROIT 1, MICHIGAN

FOR TOOLS

*Your NAPA Jobber
is a Good Man to Know!*

1 STANDARD OF QUALITY
—always equal to or surpassing the parts replaced.

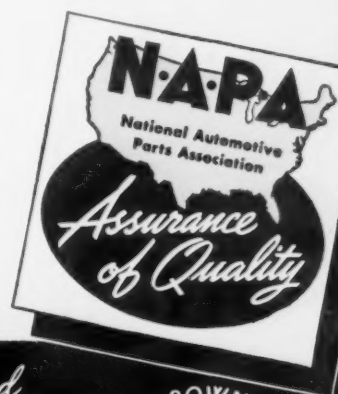
1 SOURCE OF SUPPLY
—for parts servicing cars and trucks of all makes and ages.

1 JOB TO DO
—to give all repairmen the fastest, finest, most complete service on all parts they need—whenever they need them.

Your NAPA Jobber is an independent businessman. His first — and only — function is to serve you. You can depend on his complete cooperation every time you call.

NAPA

is the largest Independent Parts Organization in the Industry!



DITTMER TRANSMISSION GEARS

American Brakeblok BRAKE LINING • CLUTCH FACINGS • FAN BELTS • RADIATOR HOSE

BRIGGS SHOCK ABSORBERS

PURITAN

Allied WISCONSIN PISTONS • SLEEVES

Buffalo MUFFLERS

Allied RAYMOND VALVE SPRINGS

MARTIN-SENOUR AUTOMOTIVE FINISHES

UNITED PARTS FUEL PUMP • HYDRAULIC BRAKE SPEEDOMETER AND BRAKE CABLES

Monmouth ENGINE BEARINGS • CLUTCH PLATES & PARTS • CHASSIS PARTS

TRICO VACUUM OPERATED SAFETY PRODUCTS

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BUFFALO FIRE EXTINGUISHERS

New Britain HAND TOOLS

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DETROIT UNIVERSAL JOINTS

CELORON TIMING GEARS

PRECISION PISTON RINGS

FEDERAL RAIL BEARINGS

BROWN LIP GEAR BOXES

BALKAMP PARTS FOR FORD CHEVROLET • PLYMOUTH AND ALL POPULAR CARS

DUCKWORTH TIMING CHAINS

Spicer UNIVERSAL JOINTS

ECHLIN IGNITION PARTS

Belden WIRE

Allied A.P.C. VALVES

HE'LL CHECK YOU *Swishy*
every time



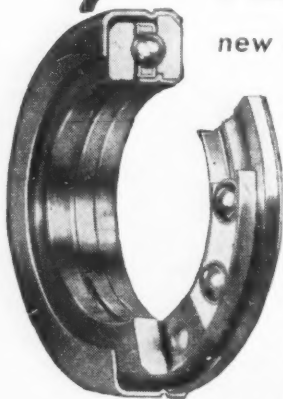
YOU may be tempted to reinstall a likely looking set of used bearings, but Swishy—and your conscience, will give you a cautioning prod.

You'll recall that Swishy is swift, sure, smooth, silent car and truck performance.

You'll remember that careful maintenance will send a motorist smiling on his way but unsatisfactory work can hurt *your* pocketbook.

HE'LL REMIND YOU:

When you rebuild a clutch or do a major overhaul, always include new BCA Bearings as protection against comebacks.



When you buy bearings, look for the Jobber displaying Swishy and always ask for BCA Ball Bearings.

LOOK FOR *Swishy* ON DISPLAY
ALWAYS ASK FOR **BCA**

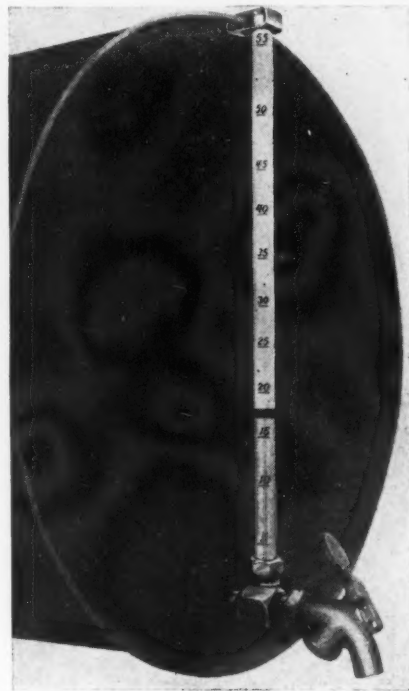
BCA

BALL BEARINGS

Bearings Company of America, Lancaster, Pa.

M-17 Mastercraft Oil Drum Gage Guaranteed

A gage for use on 50 gallon drums has been made available by Mastercraft Products, Boston, Mass. Said to be accurate



and foolproof, the Tru-Oil-Gage is practically indestructible and is unconditionally guaranteed. The manufacturer states that this gage is leak-proof, rust-proof, and has no moving mechanical parts.

For more information use coupon on page 65.



"One more word about women fishermen and I'll not even try to get my plug loose from your ear!"



Acidproof glass-cloth-covered collector tube.

Glass cloth trap will not deteriorate when attacked by engine oil acids,—an exclusive AC advantage.

CAN'T ROT!

AC'S EXCLUSIVE GLASS CLOTH COLLECTOR
TUBE TRAP PREVENTS POLLUTION OF THE OIL STREAM

Only AC gives you this powerful sales feature—the glass cloth Collector Tube Trap. It is not harmed by acids in the engine oil—it can't rot and thus allow pollution of the oil. And it filters the oil a second time, just as it enters the Collector Tube.

That's the kind of extra protection you find throughout AC "5-Star Quality" Oil Filters and Elements—better design—stronger construction—finer quality—10 powerful sales features in all.

Join the Big National Campaign

All dealers who have tied in with the AC "5-Star Quality" campaign are enjoying big sales increases. Ask your AC wholesaler what it means in extra profits for you. There's a "5-Star Quality" Oil Filter for nearly every make of engine—and a better Replacement Element for nearly every make of oil filter.



AC SPARK PLUG DIVISION

GENERAL MOTORS CORPORATION

Alderman Joins Stivers As Vice President

V. L. "Stub" Alderman has been appointed vice president in charge of operations for Stivers Auto Sales, Inc., 222 South Florissant Road, Ferguson, Missouri, it was announced recently.

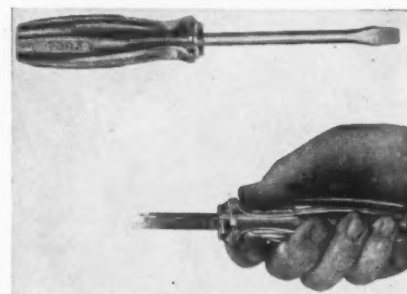
For the period 1929 to 1936, Alderman was Parts and Service Manager for the Chevrolet Motor Company, directing the

work of those departments in Illinois, Indiana, Nebraska and Missouri. From 1936 until his recent executive appointment with the Stivers Auto Sales, Incorporated, a Ford direct factory dealer, he was connected with the Chrysler Sales Corporation — as District Manager in Chicago; Director of Service, Kansas City; handling Chrysler Labor Relations in Evansville, Indiana and as Regional Man-

ager in Salt Lake City and St. Louis.

M-18 Plomb Tool Offers Screw Driver Handles

The Plomb Tool Co., Los Angeles 54, Cal., announces their new Hand Fitting Screw Driver handles, designed to improve the appearance, "feel", and utility of



screw drivers. Made of a new plastic which is said to be non-inflammable, non-explosive, and a good insulator, the handles are rounded and larger through the palm section, and smaller in diameter at the end where the little finger grips. A square section with a high shoulder near the bottom has depressions to allow a positive grip by the thumb and forefinger, and permits a harder push with less squeezing and less danger of hand slipping.

For more information use coupon on page 65.

**At Tune-Up Time,
TUNE IN MORE PROFITS**

with

DOLE *Adjustable* **THERMOSTATS**

With a Dole, your customers save on gas, oil and motor wear. Put "Thermostat" on every job ticket for extra profits — and standardize on "Dole Adjustables."

Make
**THERMOSTAT
REPLACEMENT**
A Part of Every Motor Tune-Up

- POINT OUT to your customers that every car needs a new thermostat at intervals for best performance.
- SHOW THEM how Dole adjusts to a "low" summer setting — closed for the quick warm-up so essential to top motor operation, full-open when maximum cooling is needed. Show how it re-sets for fall weather, with a turn of the adjusting screw.

Dole adjustable is the only thermostat which "tunes" to the season and type of anti-freeze. Install it as part of every cooling system job or motor check-up, and help yourself to extra profits.

THE DOLE VALVE COMPANY

1901-1941 Carroll Avenue, Chicago 12, Illinois
Representatives in Principal Cities

HANK'S GARAGE



"It's not that I mind you going out after coffee. It's just that I'm afraid it may keep you awake this afternoon."

NOW... MORE THAN EVER YOU NEED TO SELL SERVICE!

Modernize for Profit *with* **ARO** LUBRICATING EQUIPMENT

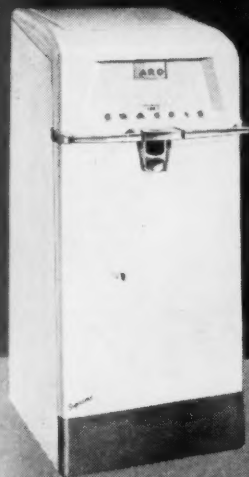
Are you handicapped by shortages? Get set now to *sell more service...modernize for profit* with smartly styled ARO Lubricating Equipment! Lubrication is the most profitable of all automotive service.

Aro means business! Aro's sleek streamlined beauty attracts the most profitable customers—those who are most particular about their cars and spend most on service and equipment.

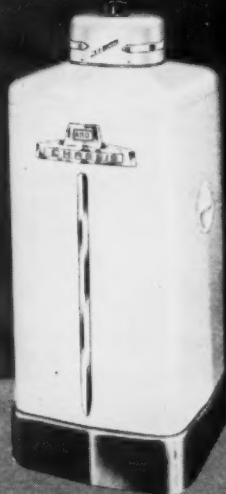
Aro saves time and labor in any type of lube service. Aro has everything you need from specialized guns to cabinet units and complete accessory equipment to meet requirements from smallest to largest lube service departments. All precision-built with famous Aro dependability. See your Aro jobber! The Aro Equipment Corporation, Bryan, Ohio.

ARO

SMART NEW EQUIPMENT



Supreme



DeLuxe



Junior

Coal Strike Cut Output Of Cars in April and May

Prospects for automobile production during May are definitely on the pessimistic side. April, with a combined U. S. and Canadian production of slightly more than 450,000 units, was about 50,000 behind the high mark made in March, and May promises to be considerably behind April. General Motors

plants started closing down the last week in April and continued into the first week in May, with all passenger car divisions down from a week to ten days because of the shortage of steel. The coal strike has hit production seriously, and it is now believed that it will be well into June before the industry can again hit its stride. Not only materials present a big problem. There is a possibility that strikes over the

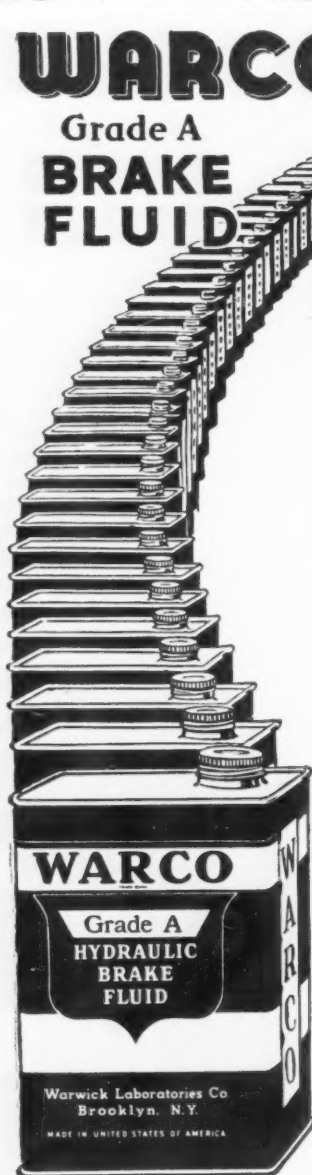
wage issue might close down one or more companies. If a stoppage does come it undoubtedly would be at Chrysler and not at General Motors, at least at the outset. Chrysler has offered the union six cents an hour, but when the offer was rejected and after U. S. Steel refused to grant a wage increase to its workers, Chrysler withdrew the offer. With the Plymouth final assembly line down for a week early in May because of a steel shortage a strike would not appear to be a strategic move on the part of the union at this time, but union leaders are not always noted for their timeliness nor their ability to control hot-headed factions within the union. Certainly a strike at a time when a company is facing curtailed production because of shortage of materials is not the best time to close it down. Another possibility that would have a serious effect on automotive production would be a railroad strike which has been threatened for this month. With all of the troubles the industry has been experiencing, predictions for an increase of perhaps 10 per cent in total production of cars and trucks this year have practically disappeared and the general feeling now is that if the industry can turn out as many

CONTINUED ON PAGE 138

WARCO

Grade A
**BRAKE
FLUID**

**Over 5 MILLION CANS
to SATISFIED USERS**



THAT'S a lot of brake fluid, five million cans. It represents a billion miles of car travel, or more! Yet in all this vast mileage — often made under unfavorable conditions of climate and weather — no service station has ever mentioned Warco Brake Fluid to us except in terms of highest praise.

A brake fluid with such an enviable background of satisfied users **MUST BE GOOD!**

Warco quality is no accident. Its outstanding performance is the result of a time-tested scientific formula that is held rigidly under laboratory control.

WARCO GRADE "A" BRAKE FLUID

Supreme quality. Non-oxidizing. Will not gum or crystallize. Low freezing point. Because of its high viscosity, ideal for hot weather and torrid climates. Chemically stable. Lubricates because of better grade oil content. Guaranteed to mix with all standard or approved brake fluids. Packed in standard cartons, in lithographed tins.

OUTSTANDING WARCO PROFIT BUILDERS

| | |
|---|--------------------------|
| WARCO Grade "A" Heavy Duty Brake Fluid | |
| WARCO Shock Absorber Fluid No. 200 | |
| WARCO Knee Action and Shock Oil No. 100 | |
| WARCO No-Tun-Up | WARCO "K.O." Carb |
| WARCO Radiator Flush | WARCO Radiator Solder |
| WARCO Rube-A-Lube | WARCO Engine Weld |
| WARCO Penetrant | WARCO Jack Oil |
| WARCO General Purpose Oil | WARCO Gasket Cement |
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WARCO REPLACEMENT UNIVERSAL JOINT BOOTS

Ask your jobber, or write us.

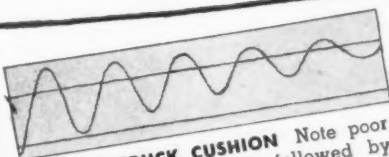
WARWICK LABORATORIES COMPANY
334-42 Cleveland Street
Brooklyn, N. Y.

WARCO

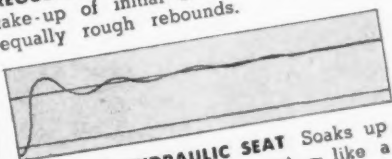


"I call 'er 'Old Faithful'! She's been erupting for the past fifteen years!"

Why More and More Dealers are Selling Bostrom Hydraulic Truck Seats



REGULAR TRUCK CUSHION Note poor take-up of initial shock followed by equally rough rebounds.



BOSTROM HYDRAULIC SEAT Soaks up initial shock and levels out — like a passenger car ride.

1 UNMATCHED COMFORT and SAFETY

Bostrom Hydraulic truck seats solve the age-old problem of driver fatigue, ill health and safety hazards caused by pounding truck seats. Shock absorber and suspension mechanism of the Bostrom seat soak up millions of jolts and jars instead of intensifying them and passing them on to the driver. The Ride-Graphs at the left show for the first time what actually happens to a single road shock in an ordinary truck seat as compared to a Bostrom Model 47 hydraulic seat.

2 NEW ECONOMY

Accurate tests prove that the Bostrom Model 47 seat outlasts ordinary seat cushions 6 to 1. The Bostrom seat eliminates "back scrub" that ruins even the best fabric. The seat has no coil springs to damage the fabric; no mechanical parts to wear out. Bonded rubber pad lasts a lifetime. New coverings are snapped on in 10 minutes. They put an end to truck layups and big bills for major seat repairs.

3 PROVED PROFIT

Many dealers have found that Bostrom hydraulic truck seats are good profit builders. The purchase of one seat often leads to a whole chain of sales. Bostrom advertising creates new prospects 12 months of the year.



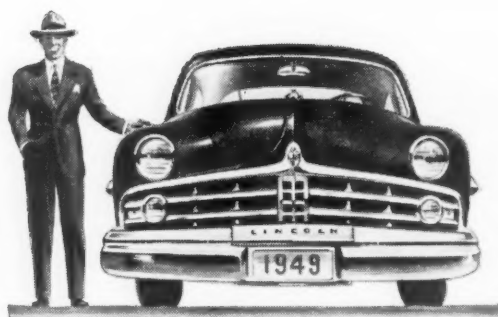
Write for free folder
"12 Eye Openers Concerning Truck Seats."

BOSTROM

Bostrom Hydraulic Seats now standard or optional equipment on the following trucks: GMC, Diamond T, Federal, Hendrickson, Dart, Peterbuilt, Walter, Ward La France, FWD, Oshkosh, and Coleman. Be sure to specify Bostrom Model 47 Seats on your new trucks.

BOSTROM MFG. COMPANY 133 W. OREGON ST., MILWAUKEE 4, WIS.

When writing to advertisers please mention Motor Age

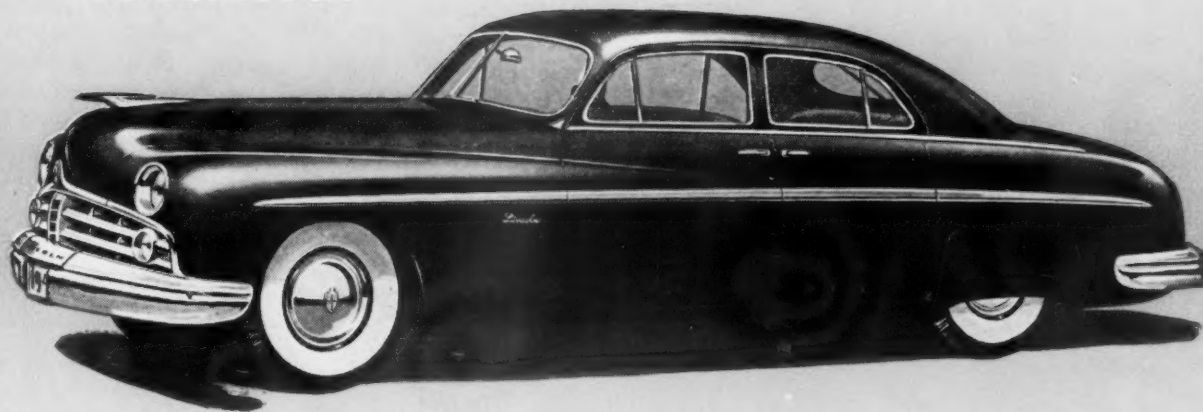


*First 1949 cars
in the industry!*

TWO COMPLETELY NEW



The Lincoln



1949 *Lincolns*

IN A CHOICE OF MAGNIFICENT BODY STYLES
AND TWO SEPARATE PRICE RANGES

THEY took years to perfect! But here at last, in Lincoln dealers' showrooms, are the cars America has been waiting for. Because from bumper to bumper, from tire to top, these two fine new 1949 Lincolns are *completely new and completely right!*

NEW! RIGHT! You'll see it instantly in the lines. Both the new Lincoln and the new Lincoln Cosmopolitan have a low, sweeping breadth. A hug-the-road look that promises surging fleetness in action.

NEW! RIGHT! No more perfect engine has ever been built! Completely new, completely proven, it's a masterpiece of engineering art! 8-cylinder, V-type, 152-horsepower strong, it's an engine put together as painstakingly as a plane's. An engine you can count on for brilliant performance and magnificent strength.

NEW! RIGHT! Never before such blissful riding comfort! Lincoln's completely new spring suspension floats you gently over the roughest spots. Lincoln's new low center of gravity and wonderful new super-balloon tires let you take the curves, minus sway. Every mile of the way, Lincoln's perfect balance is a new experience in effortless driving.

THEY'RE CARS TO FALL IN LOVE WITH—on every count right down to their luxurious interior appointments done in timeless, perfect taste. Such *great* cars, such *completely new* cars as these are produced only once in many years. That's why, whatever motorists' plans have been, they'll be sure to look at Lincoln!

LINCOLN-MERCURY DIVISION OF FORD MOTOR COMPANY

Nothing could be Finer—or Newer!

Coal Strike Cuts Output

CONTINUED FROM PAGE 134

units as it did last year it will be doing very well indeed. The effects of the Marshall Plan and the re-armament program on the steel supply still are not known, but they certainly will take an indefinite amount of steel that otherwise might go to the automotive industry. Also some observers are not nearly so sure

as they were a few weeks ago that some type of control or allocation will not be put on steel and possibly other scarce materials this year. So far, congress has opposed the idea, but there is a growing doubt that voluntary allocations will be adequate. So some persons in the automotive industry say they would not be too surprised if some type of control were to be established late this year.

Studebaker Quarterly Net Higher Than Last Year

Net profit of Studebaker Corporation for the quarter ended March 31 this year was \$4.25 million on net sales of more than \$91 million. In the same quarter of 1947 the company earned \$1.655 million. Sales of 58,994 cars and trucks during the first quarter of this year exceeded by more than 11,000 the number of units sold in the same period of 1947.

Torque Converter Preferred For Automatic Transmission

From all unofficial reports coming out of automobile companies it is becoming increasingly evident that the torque converter has the inside track in the automatic transmission field. Practically every company has been conducting exhaustive tests with this type of automatic drive. Another indication is the trend toward larger engines with more horsepower output. The Hudson 6 and the new Lincoln and Mercury engines have been stepped up considerably in power and Oldsmobile is working on a new engine of greater power for introduction possibly next year. It is believed that the trend toward more horsepower is definitely linked to the possibility of using a torque converter.

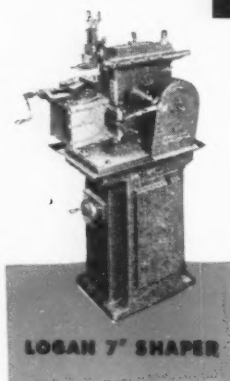


**Logan... A NAME TO REMEMBER
WHEN YOU THINK OF BETTER
LATHES AND SHAPERS**

No. 820
Quick Change
Gear Lathe

Logan Lathe
prices start at
\$159.50

LASTING ACCURACY



The ability of the Logan Lathe to work to closest tolerances after years of usage results from advanced design and precise construction methods. The Logan ball bearing mounted spindle, for example, is constant in its accuracy through all speed ranges and under all operating conditions. Headstock bearing faces are held to an accuracy of .0005". Total spindle run-out 12 inches from the bearing is less than .0008". Bed ways are within .0005" of parallelism. Rugged, massive construction is combined with these precision standards. Vital points of the lathe are protected by self-lubricating bronze bearings. It is this careful building that gives the Logan Lathe its lasting accuracy. Full information on Logan Lathes and Shapers on request. U-2

SPECIFICATIONS COMMON TO ALL LOGAN LATHES ... swing over bed, 10 1/2" ... bed length, 43 1/4" ... size of hole through spindle, 25/32" ... spindle nose diameter and threads per inch, 1 1/2"—8 ... 12 spindle speeds, 30 to 1450 rpm ... motor, 1/2 hp, 1750 rpm ... ball bearing spindle mounting ... drum type reversing motor switch and cord ... precision-ground ways, 2 V-ways and 2 flat ways

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LOGAN ENGINEERING CO. CHICAGO 30, ILLINOIS



"Where is the check room? My husband told me to have the oil checked!"

Easier to Stock...
Easier to Sell



PACKARD IGNITION CABLE SETS

Here's your top-selling cable in top-selling form
—packaged in sets for all popular makes of cars.

Packard Ignition Cable Sets are easy to stock on
your shelves . . . and make a nice display.

They're easy to sell. Customers like to know that
they're getting a "package" specially made for
their car.

And when you sell a re-wiring job, just reach for
the right set and put it on. There's no hunting,
no fussing, no soldering, no special tools.

It's easy to boost your re-wiring profits. Order
Packard Ignition Cable Sets, in Four-Forty or
lacquered cable, from your Packard distributor.



COUNTER DISPLAY GROUPS

No. 470 No. 471
Four-Forty Cable Lacquered Cable
9 Packard Ignition Cable Sets in each
group give well-balanced assort-
ment for majority of cars on road.



**FOREMOST BUILDERS OF
AUTOMOTIVE AND AVIATION WIRING**

NLRB Ruling Affects State Automotive Dealers

Automotive dealers whose business is largely confined to transactions within the boundaries of their own States now are subject to certain orders of the National Labor Relations Board, as a result of a recent NLRB decision.

The board, in a 3-2 decision, ruled that it had authority to

order a plant election at the Liddon White Truck Co., Inc., of Nashville, Tenn. The board earlier had ruled that it had authority under the Taft-Hartley labor act to enter a labor-management dispute at the plant.

The basic issue before the NLRB was whether or not the board could order an election at Liddon White which would determine a collective bargaining

agent. Although the two dissenting members of the board held that the majority opinion would result in a "general change of policy" and would take a federal agency into situations of "essentially local flavor," the election was ordered held within 30 days.

The case arose before the NLRB on a petition filed by the International Association of Machinists, an independent union. Judson Harwood, of Nashville, petitioned the case for Liddon White, while John W. Carlton, of Birmingham, Ala., and H. C. Summers, Jr., of Nashville, petitioned for the union.

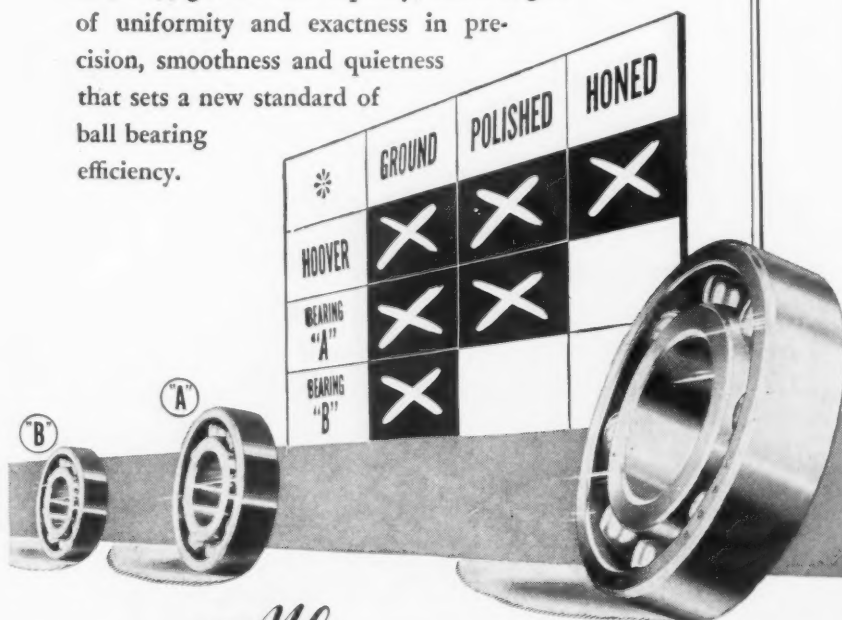
In the majority opinion, John M. Houston, James J. Reynolds, Jr., and J. Copeland Gray—all NLRB members—said that the fact that Liddon White received its goods from outside the state (Cleveland, Ohio) brought into interstate commerce and hence subject to federal regulation. The board rejected the company's contention that Liddon White was a local enterprise not in interstate commerce.

"All trucks and accessories sold by the employer are shipped to it from points outside the State," the NLRB declared in its decision. "In addition, practically all parts used by the employer are shipped to it from

CONTINUED ON PAGE 142

Out front in the Raceway race *

Hoover Ball Bearings win in the raceway race because they are ground, polished and honed. Hoover is the only ball bearing manufacturer taking the third step . . . honing the raceway. The honed raceway is an exclusive Hoover feature that pays off Hoover customers with 30% longer bearing life, 30% greater load capacity, and a degree of uniformity and exactness in precision, smoothness and quietness that sets a new standard of ball bearing efficiency.



THE ARISTOCRAT
OF BEARINGS

Hoover

America's only Ball Bearing
with HONED RACEWAYS

HOOVER BALL AND BEARING CO., ANN ARBOR, MICH.



"Yours are cuter though"

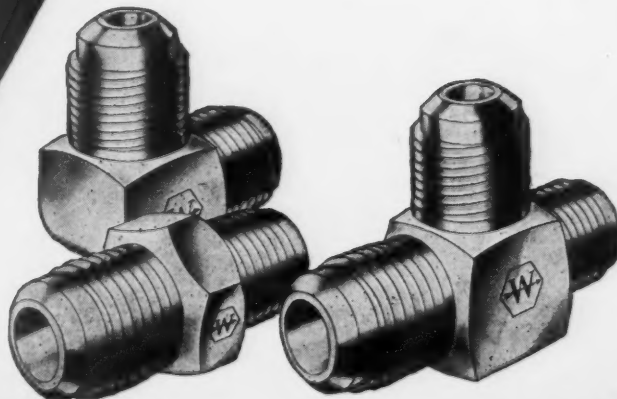
— THE MARK OF QUALITY —



The Right Fitting ...The Right Fit

Weatherhead Fittings are precision machined to S.A.E. Standards. Threads and bodies are clean cut for exact fits.

You can depend on Weatherhead as a reliable source for a complete range of sizes and types of fittings.



Look Ahead with

THE Weatherhead CO.

CLEVELAND 8, OHIO

PLANTS AT CLEVELAND, OHIO • ANGOLA, INDIANA • COLUMBIA CITY, INDIANA
HOUMA, LOUISIANA • ST. THOMAS, ONTARIO, CANADA

NLRB Dealer Ruling

CONTINUED FROM PAGE 140

outside the state. The courts have continually regarded such an inflow of goods in interstate commerce as sufficient to bring an enterprise within the board's jurisdiction."

In a dissenting opinion signed by Paul M. Herzog, and Abe Murdock, chairman and member of the board, respectively, it was

held that the NLRB already has enough to do with the record number of cases being filed, without seeking "new fields to conquer."

"An agency that received 12,500 new cases in the most recent six-month period and closed its books on March 1 with 9,500 cases pending ought not, in our opinion, to embark upon a search for new fields to conquer. There is more than enough to do. We

believe that it would be better for the board to concentrate attention upon expediting action on cases in important industries, rather than dissipate its energies upon matters that would normally be the concern of the States.

If it be said that certain States do not now have the necessary machinery available, we reply that the unrestricted expansion of federal jurisdiction is the most likely way to assure the perpetuation of that condition."

Liddon White, a Tennessee corporation, has its sole office and place of business in Nashville, where it is engaged in retail sale of White motor trucks, accessories, and parts, and in the repair and servicing of White and other makes of trucks. As a result of the decision, an election will be held in which its mechanics, mechanic trainees, and helpers may participate.

Nash Net Profit Drops During Second Quarter

Net profit of Nash-Kelvinator Corp., after taxes, declined during the three months period ended March 31 to \$4,751,848, compared with a net profit of slightly more than \$5.6 million for the previous quarter. The earnings, however, were slightly above the same period of 1947. Shortages of steel and gas fuel limited production during the quarter with plants down at times during January, February, and March.

The Most Complete Coverage in the Automotive Field...



- QUALITY PRODUCTS
- UNCONDITIONALLY GUARANTEED
- UNIFORMLY BOXED



**LINE UP
WITH LION**



LION AUTO PARTS AND MFG. CO.
1920 SOUTH MICHIGAN AVE. CHICAGO 16, ILLINOIS



"I'm good—but not that good!"

Distinctive!

Crescent Wiry Joe ignition sets are distinctive—in color, in quality, in packaging! Check these outstanding Crescent Wiry Joe features:

LACQUER: Crescent Wiry Joe special maroon lacquer, applied in as many as twenty-four coats, provides an outer covering highly resistant to heat, cold, gasoline, oil, grease, moisture, salt air, corona.

BRAIDING: Crescent Wiry Joe braids are made of soft, combed, or super-carded yarns of first quality.

INSULATION: Crescent Wiry Joe insulation now combines a pre-war type, high grade, natural rubber with wartime developments in compounding for new dielectric properties.

PACKAGING: Crescent Wiry Joe attractive, sturdy, metal-edged packages of modern design increase shelf-display value; preserve and protect the ignition set right up to the point of installation.

✓ Check the wire
on every job!



When next in our neighborhood, drop in—see how Crescent Wiry Joe automotive cable is made from copper to finished product in one plant under one roof.



SOMETHING EXTRA IN BRAKE SERVICE, TOO **FLUSH AND FILL**

When your customer's brake fluid is low and requires a shot or two to bring it up, you can take care of him with Puritan Hydraulic Brake Fluid.

But if you want your customer to be sure of complete brake safety — for a long time to come — you'll suggest something extra — a thorough cleaning out of dirty, gummy, overworked brake fluid with Puritan Hydraulic Brake Flushing Fluid and a replacement with fresh, active, Puritan Brake Fluid.

And Puritan Hydraulic Brake Flushing Fluid makes this flushing job easy to do, and profitable too. Once through the line and the system is thoroughly clean. Then a filling of Puritan Brake Fluid and your customer is assured of many miles of safe braking.

Just tell your NAPA jobber you want to do a flush and fill job. Let him send you fast-acting Puritan Hydraulic Brake Flushing Fluid and Puritan Hydraulic Brake Fluid.

FLUSH AND FILL FOR BRAKE SAFETY



1. Clean hydraulic brake line with fast-acting Puritan Hydraulic Brake Flushing Fluid.



2. Refill with non-gumming, all-"miscible" Puritan Hydraulic Brake Fluid.



PURITAN COMPANY, INC.
ROCHESTER 6, NEW YORK

HYDRAULIC BRAKE FLUID AND FLUSHING FLUID • GASKA-SEAL NO. 1, 2 AND 3
SHOCK AND KNEE-ACTION OIL



K-F Goes on 56-Hour Week As Sales Climb Sharply

Sales of Kaiser and Frazer automobiles appear to be definitely on the improved side. In mid-April when production showed signs of falling behind orders, the plant work shift was increased one hour a day to nine hours. That proved inadequate, however, to keep production on a par with orders so the company announced a six-day work week beginning the first of this month. The Saturday work day will consist of eight hours, making a 53-hour work week. The company reports that all dealers now are receiving cars on an allocation basis.

Antarctic Weather Fails To Damage Automobiles

Vehicles and other motorized equipment remain well preserved after considerable exposure to the Antarctic elements, according to Ensign C. W. Mallory, Civil Engineer Corps, U. S. N., who recently returned from a second visit to Little America.

After 12 months of exposure to the frigid temperatures and 100-miles-an-hour winds of Little America, a Navy jeep and several other types of motorized equipment showed no signs of rust or appreciable damage and

CONTINUED ON PAGE 146



"I'm sorry but you'll have to be accompanied by a parent or guardian."

ANNOUNCING
AN OUTSTANDING ADVANCEMENT IN
MOTOR LUBRICATION

MIRACLE POWER



- Relieves Sticky Valves
- Faster, Easier Starting
- Reduces Friction and Wear of Engine Parts
- Improves Engine Performance
- Cuts Engine Operating Costs
- Lengthens Engine Life

Write or Wire for Franchise Information



THE **AP** PARTS CORPORATION • TOLEDO 1, OHIO

MANUFACTURERS OF THE FAMOUS AP "MILEAGE GETTING" MUFFLERS AND PIPES

Antarctic Weather Fails To Damage Automobiles

CONTINUED FROM PAGE 144

were started without difficulty, Ensign Mallory reported.

Dug out of a 10-foot snow-drift, a weasel (snow tractor) was started up on the fuel, lubrication and storage battery which had remained in it a year. It was first preheated with hot air blasts to remove four inches of

ice which had accumulated on the instrument panel.

The jeep, which had been left in a canvas-covered shed, started up without preheating, as did two GMC diesel motor 25-30 kilowatt generators. Other equipment similarly tested included a gasoline engine D-6 tractor, a TD-9 International tractor, and battery charging apparatus.

"No rust had appeared on the

metal surfaces of the equipment which was left exposed to the moisture-less atmosphere where 28°F is considered warm weather," Ensign Mallory said. "Also, no appreciable damage was evident from snow which had drifted over the machines and structures purposely abandoned in 1947."

New Styling May Reduce Number of Body Types

It is understood that when G.M. makes its next model change it will adopt only a single basic body type where the "A" and "B" bodies now are used. While the report is entirely unconfirmed, the current trend in styling would definitely suggest the possibility of such a move. As more and more new models appear, they bear the stamp of similarity so far as basic styling is concerned. All carry the lower, wider, pontoon side effect and vary only in degree and in grille and rear end treatment. Currently the General Motors "A" and "B" bodies differ principally in treatment of the back, that is, one has the fuller sweeping streamlined effect, and the other the shorter notch back. At any rate, it is an interesting speculation that differences in styling will be narrow enough to permit use of one basic design where two were formerly used.

MOBO RADIATOR SOLDER
Liquid or Powder—seals leaks and retards rust at the same time. Thoroughly clog-proof and non-injurious to cooling system. Economical to use—works with all types of anti-freeze.





MOBO RADIATOR CLEANER
is a harmless, concentrated solvent for grease, rust sludge and scale. Gives cooler motor operation and longer service. Requires no reverse flushing. Contains Cleaner and Neutralizer.

PROFIT with the MOBO
RADIATOR SERVICE LINE

There's a big market and demand for these MOBO radiator-protection products. They work effectively and sell fast.

MOBO makes money the year round—get your share of it.

Write today! A penny postcard will bring you the MOBO man with MOBO's 1948 program for lower inventory, increased profits and faster turnover.

JOHN T. STANLEY CO., Inc., 626 West 30th Street, New York 1, N. Y.



"Do either of you recall me telling you several months ago that these tires, batteries, and things were for sale?"

THERE ARE PROFITS FOR YOU NOW IN LIGHTWEIGHT MOTORCYCLES



Look Into These JAWA Profit-Making Opportunities

- ✓ The JAWA "250" is a profitable, fast seller in a booming motorcycle market.
- ✓ Liberal dealer discount means substantial profit on every JAWA "250" sold.
- ✓ Liberal Franchise Terms. The JAWA Franchise provides full opportunity to develop every prospect in your area.
- ✓ Immediate delivery assures prompt filling of every customer order.
- ✓ Additional profits on sale of replacement parts. Parts available immediately.
- ✓ Extra income from JAWA servicing.
- ✓ Full dealer cooperation; mats, display material, prospect inquiries, national advertising.

THE BIG MOTORCYCLE BUYING SEASON IS JUST AHEAD.

If you are interested in cashing in on a JAWA Dealer Franchise in your community, write us today. Complete information on the JAWA "250" and your profit-making possibilities as an authorized JAWA Dealer will follow by return mail.

**CASH-IN ON THIS OPPORTUNITY TO BECOME THE
LEADING MOTORCYCLE DEALER IN YOUR COMMUNITY**

JAWA MOTORCYCLE COMPANY

Division of Industrial Operations, Inc.

Dept. 4 460 FOURTH AVENUE, NEW YORK 16, N. Y.

Never before has a motorcycle been sold and widely publicized as intended for *transportation* as well as for sport and recreation. Never before has there been a motorcycle like JAWA which is so well adapted to sensible, sane *transportation utility*.

JAWA is especially designed for safety and comfort on any road. It has all of the economy and simplicity and ease of handling of a light-weight machine, yet it is heavy enough to give the rider a feeling of security with no jounce, no speed wobble, no road shock.

NO OTHER MOTORCYCLE GIVES YOU ALL THESE JAWA FEATURES:

1. Dynamic, graceful design. Beautifully streamlined.
2. Smooth riding. "Tele-Float" spring suspension assures safe, comfortable driving on any road.
3. Easy driving. Automatic clutch. Pedal gear shift. Illuminated gear indicator.
4. Safe driving. 6x1" internal expanding brakes, front and rear. Adjustable steering control.
5. Powerful engine. Two-cycle engine develops 9 horsepower. Amazing get-away; capable of high average speeds with amazing fuel economy (94 miles per gallon).
6. Rigid, balanced frame structure.
7. Easy accessibility for servicing.
8. Enclosed engine, transmission and carburetor. Fully protected against dust, mud and water.



When writing to advertisers please mention Motor Age

Antarctic Weather Fails To Damage Automobiles

CONTINUED FROM PAGE 144

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MOBO RADIATOR SOLDER
Liquid or Powder—seals leaks and retards rust at the same time. Thoroughly clog-proof and non-injurious to cooling system. Economical to use—works with all types of anti-freeze.

MOBO RADIATOR CLEANER
Is a harmless, concentrated solvent for grease, rust sludge and scale. Gives cooler motor operation and longer service. Requires no reverse flushing. Contains Cleaner and Neutralizer.

**PROFIT with the MOBO
RADIATOR SERVICE LINE**

There's a big market and demand for these MOBO radiator-protection products. They work effectively and sell fast. MOBO makes money the year round—get your share of it.

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6. Rigid, balanced frame structure.
7. Easy accessibility for servicing.
8. Enclosed engine, transmission and carburetor. Fully protected against dust, mud and water.



When writing to advertisers please mention Motor Age

Ford Burns Up Five Sets Of Distributor Points

We have a 1947 Ford coming to our garage for service which now has 4000 miles, and we have installed the fifth set of distributor contacts with the same results. After new contacts are installed the motor runs perfect for the first 200 to 300 miles then

it starts missing and cutting out. When the contacts were removed they had turned blue.

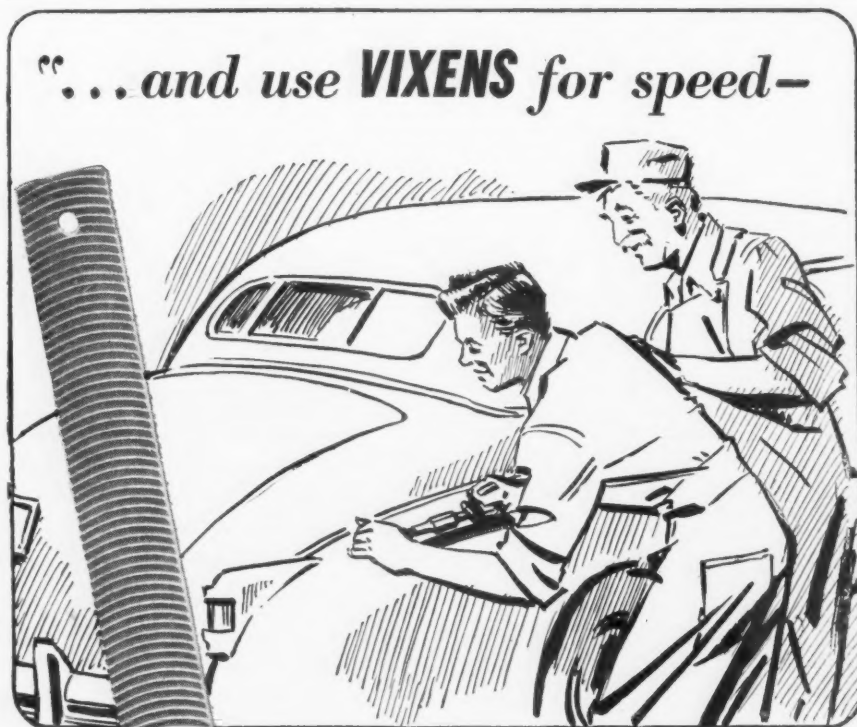
We have installed new spark plugs, insulated all wiring, checked all battery, switch and wiring connections, replaced condenser, resistor unit, tested coil, and tested for high voltage all the way through. We have

used genuine Ford parts.—Oscar Kaski, Service Mgr., Welch's Motor & Service, 1160 E. Portage Ave., Sault Ste. Marie, Mich.

It seems to me that you have already done considerable work in an effort to stop burning the contact points on your 1947 Ford. However, to burn a set of points in 200 to 300 miles it would undoubtedly be caused by one or more of the following conditions.

Under-capacity condenser, condenser improperly grounded, generator voltage too high, faulty ground connections, incorrect spacing of points, or resistance unit improperly installed.

I would suggest you check all the above items very carefully and believe this will eliminate your trouble.



ONLY HELLER MAKES VIXENS

Vixen Files have been serving auto body and fender shops for years. Widely imitated, they have never been equalled. Specify genuine Vixens—made only by Heller—when you order from your jobber.

—they're faster-cutting files!"

"Take a tip from an old-timer who knows. Body and fender refinishing goes a lot faster with genuine Flexible Vixen Files. Easier, too. Each deep, curved tooth cuts just right—whether you push straight ahead or file at an angle.

"And another thing. Vixens don't clog up with chips that spoil the finish. Just a quick, smooth job every time. That's good filing...Vixen filing!"

HELLER BROTHERS COMPANY

Newark, N. J.

Newcomerstown, Ohio

America's Oldest



File Manufacturers

GENUINE
HELLER

VIXEN

MILLED
CURVED-TOOTH
FILES

Tucker Makeready Costs More Than \$11 Million

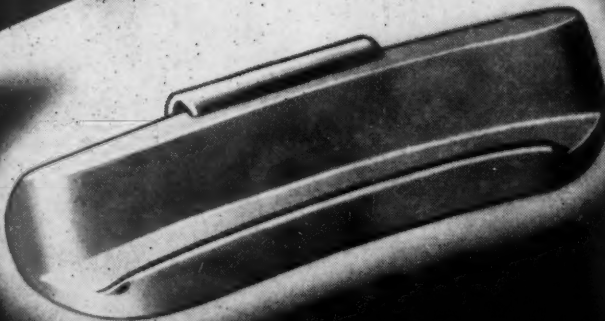
Tucker Corporation reports that it has spent more than \$11 million to date getting ready for production of its new automobile at its Chicago plant. Preston Tucker, president, reported that the company has approximately \$6,700,000 cash on hand in addition to \$4.6 million in notes given by dealers in payment for franchises. Work on the initial 125 pilot cars is underway with about 100 units scheduled to be on the body lines this month. Assembly line production still is expected to start in June although at very nominal rate. Tucker said that volume production is contingent upon the company acquiring a government-owned blast furnace at Cleveland which it is trying to buy. He said that first cars produced will use the engine being built by Aircooled Motors, Inc. at Syracuse, N. Y., which Tucker Corp. acquired at the cost of \$1.8 million. The engine is said to be similar in design to the Tucker power plant, and jigs and dies will be transferred from Syracuse to Chicago at a later date.

New Solutions TO A "WEIGHTY" PROBLEM

STANDARD



CADILLAC

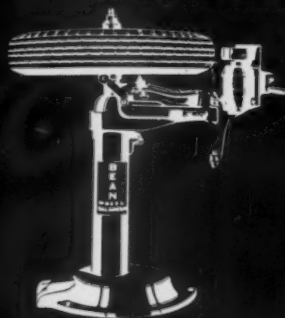


John **BEAN** WHEEL WEIGHTS

WITH A NEW TAPERED DESIGN

- ★ FIT UNDER WHITE SIDEWALL RIMS
- ★ SNAP ON QUICKLY
- ★ WILL NOT SCRUB OR FLY OFF
- ★ FIT BOTH SIDES OF WHEEL
- ★ HAVE INCONSPICUOUS STREAMLINE SHAPE
- ★ AVAILABLE IN 1/2 TO 6 OZ. SIZES

The new John Bean wheel weights have been designed for attractive appearance plus cost-saving efficiency. Use them with a John Bean Balancer—the balancer that eliminates guess work in weight placing—to insure greater profits.



JOHN BEAN

Division of FOOD MACHINERY CORPORATION

LANSING 4, MICHIGAN



WHEEL ALIGNERS AND CORRECTION TOOLS WHEEL BALANCERS
AND BALANCING TOOLS WEIGHTS CAR WASHERS

Buick Engine Covered With Thin Oil Film

I have a 1947 Buick Roadmaster Convertible. I purchased this car in June '47 after driving 5,000 miles. I made a 650 mile trip. I drove at speed most of time, 75-80 mph, on the highway. This car has always consumed oil but after returning

home I noticed while checking oil that the breather pipe was covered with oil from the end back towards the motor as far as the starter. Inside of pipe at end was dry, on looking closer I noticed oil on motor block side back of starter. Looked like oil was coming out of back of motor just in front of joint of clutch

housing and motor block. Since then I have driven about 3,000 miles and cannot notice any more oil leaking on pipe. I figured wind carried it along the pipe quite a distance back of the motor. It did not look as though it come for the side of the motor but more in the center of the rear end of block. Nothing there as far as I know that could leak oil. — Massachusetts Subscriber.

In regard to your 1947 Buick on which you noticed an oil film around the rear end of the engine. I feel sure this condition is caused by the oil vaporizing as it comes from the breather pipe. This is not a common condition and I do not think there is any cause for worry as you say it has not effected your oil consumption.

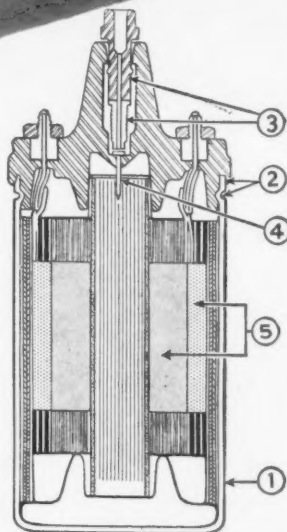


CHECK with PEEDEE
on the inside features
of the
P & D COILS

• When you cut open a P&D Coil, check these few inside features and see why the P&D Coil does a better job.

Notice (1) how the patented one-piece aluminum air-cooled can is ribbed to give ample surface to dissipate heat generated in the coil windings. This assures uniform performance. See (2) the way in which our own Perma-Sealing method of locking the plastic top to the can makes for an absolutely moistureproof seal. (3) The combination high tension terminal for both screw and plug type connections (a solid brass insert) is molded into the cap to assure a moistureproof connection and (4) to eliminate a soldered wire joint — thus preventing breakage from vibration. (5) The secondary and primary are wound and balanced to give peak efficiency plus the correct high tension polarity in each coil.

If you're already handling the P&D one complete line, I don't have to tell you how these quality electrical parts help you do a better tune-up job, keep your customers happy and make more money for you. But, if you're not handling this line, just drop me a card and I'll mail you a copy of our Catalog No. 47 which gives full information.



U. S. Pat. No. 102001

*Turn Out Better
Tune-up Jobs
with Pee Dee*



P & D

MANUFACTURING COMPANY, INC.

LONG ISLAND CITY 5, N. Y.

STARTING • LIGHTING • IGNITION

How to Increase Acceleration on DeSoto

In a few weeks I'll own a 1941 Custom DeSoto. I happen to know that the car has been well cared for and is in pretty good shape.

I would like to increase the acceleration of this car. My main object is to increase the acceleration up to the top speed rather than increase the top speed. It goes fast enough.

How much can I safely plane

CONTINUED ON PAGE 152



"That tool salesman had an appointment for two-thirty—He is getting impatient."

CAM GRINDING

Cam grinding, T-slot and Lo-Ex alloy were all pioneered by Alcoa to assure closer conformity of piston and barrel when hot. These developments mean less compression loss, more and smoother power.

ALUMINUM COMPANY OF AMERICA

Makers of Lo-Ex Piston Castings
of Alcoa Aluminum

2133 Gulf Bldg., Pittsburgh 19, Pa.
Sales Offices in Principal Cities

LO-EX *Pistons* of Alcoa Aluminum

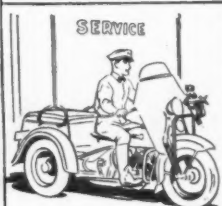
Registered Trade Mark



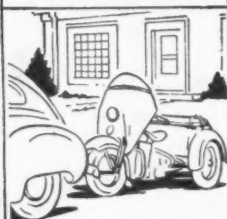
Make it easy for customers to come back *with* **SERVI-CARS**



CUSTOMER PHONES
FOR SERVICE



QUICK CALL-FOR



QUICK PICK-UP



PROMPT RETURN

Hold and build up your repair business with SERVI-CARS! Make sure first-time customers come back regularly. *Go after them* anywhere in town. With SERVI-CARS, distance is no handicap. You make it convenient for customers to let you serve them, no matter where they live.

SERVI-CARS pay off in many ways . . . by helping regulate work flow and keeping mechanics profitably busy, by saving time on parts and accessory pick-ups, by drawing business from all over town and advertising you wherever they go.

Hold your old business, get more new business, make all repair business more profitable . . . with SERVI-CARS. Phone your Harley-Davidson dealer today and ask him for a demonstration. Write for folder that points the way to new profits for you.

HARLEY-DAVIDSON MOTOR CO.

DEPARTMENT MA • MILWAUKEE 1, WISCONSIN

Readers Clearing House

CONTINUED FROM PAGE 150

off the cylinder head? Would you advise making any changes in the vacuum advance? Should cooler plugs be used? Increase the breaker arm spring tension and increase the cam angle? How much cam angle increase, if any? Would it be necessary to make any carburetor changes? I've heard of cutting the generator field wire and inserting a switch. Would that do any harm to the generator or regulator if the regulator was rechecked? Would it all help the cause any? Would it be necessary to relieve any back pressure in the exhaust system?

Anything you think might help will be closely followed. Thanks.—Dick Ross, 222½ S. Marion, Washington, Iowa.

Replying to your recent letter requesting information on how to increase the engine speed on your 1941 DeSoto, I would suggest you plane about .060 in. from your cylinder but would not make any change on your vacuum advance other than to check distributor on a test stand to see whether everything is operating correctly according to specifications. Increasing the

CONTINUED ON PAGE 154



"But I have finished my homework!"

Tire Engineers say:

**"CORRECT TIRE INFLATION
IS ESSENTIAL WITH NEW,
LOW PRESSURE TIRES!"**

"Look, Shorty," Slim exclaimed, "exactly correct tire pressure with the new Low Pressure balloons and new synthetic inner tubes is emphasized every day in advertisements, trade paper articles —"

"Yes," Shorty interrupted, "and tire engineers are recommending master gauges everywhere tires are serviced. Luckily the new Eco Tireflator and Eco's BALANCED INFLATION* program meet both needs!"

**YES,
THE NEW ECO
TIREFLATOR—**

with its master gauge accuracy . . .

inflates tires to exact pressure required!

Low Pressure balloons and synthetic tubes — you're hearing and reading more about them every day — you're learning too, they should be inflated to the *exact* pressure recommended, not one pound under or over.

Eco's new fully automatic Tireflator meets this *exact inflation requirement*, because it provides an absolutely accurate, precision means for inflating *all* sizes of automotive tires. Eco's precision calibration assures unvarying accuracy from 5 to 110 pounds — when you set the large Eco dial for a certain pressure, you get exactly that pressure — no more, no less.

The new Eco Tireflator is in itself a MASTER GAUGE with which you can check the accuracy of other pressure testing equipment. It provides the only practical means of master gauge use in service stations, because it is contained in a permanent, factory-sealed, tamper-proof housing to protect its precision accuracy.

Then too, Eco's BALANCED INFLATION merchandising program ties right in with the growing emphasis on correct inflation. BALANCED INFLATION enables you to offer your customers greater safety, longer tire life, new riding comfort — all the benefits your customers want!

Prepare today to cash in on the new sales opportunities that the new Low Pressure tires and synthetic tubes offer you. Ask your Jobber about the four new Eco Tireflators and send for Eco's free book "Amazing Profits Out of Balanced Tire Inflation" — get complete details on the program that turns "free air" into a profit and good will building service merchandiser!

*Copyright 1947 Service Station Equipment Company



JOHN WOOD *Affiliate*

SERVICE STATION EQUIPMENT COMPANY, MUSKEGON, MICHIGAN

Send me your new, FREE book, "Amazing Profits Out of Balanced Tire Inflation."

NAME _____ MA

COMPANY _____

ADDRESS _____

CITY _____ STATE _____





**Uncover
these Bigger
Seat Cover
Profits . . .**

America's Finest Seat Covers

Just look at this better profit picture on seat covers . . . under the amazing Rankin plan! It gives you America's Finest custom-fitted covers at the same price as non-fitted covers. Exclusive to independent dealers . . . no chain store or mail-order competition. Rich, Lumite woven plastic covers, beautifully tailored in smart candy stripes, pastels, colors and designs. There's nothing finer. Get YOUR share of these better profits. Write for the facts today.



**RANKIN
MANUFACTURING
COMPANY**

DEPT. R
CEDAR FALLS, IOWA

Readers Clearing House

CONTINUED FROM PAGE 152

spring tension on the breaker point will insure good performance at high speed.

As to your regulator and cam angle, I think they will give better performance if they remain as they are. Colder spark plugs will last longer if engine is subjected to high speed driving. The original muffler is designed to take care of any engine speed. You might install a richer main jet in the carburetor as a rich mixture will help engine on acceleration.

I would also suggest that you grind the valves and reset the block with a grinder. Also clean and remove all burrs from inside of valve ports.

When is the Piston Travel the Greatest?

We've been having a little trouble trying to clear up this matter, so we decided to send it to you and take your decision.

The problem is, does a piston travel farther in or during the upper half of the crankshaft revolution than in the bottom half?—Don Westwood, Fassero Pontiac Co., 318 S. Macoupin, Gillespie, Ill.

The answer to your problem as to whether a piston travels farther in or during the upper half of the crankshaft revolution or the bottom half, is as follows:

The motion of the piston is greater during the upper half of the crankshaft rotation. The difference in piston motion is greater when the rod is shorter.

If it were possible to design an engine with a connecting rod as long as one-half of the stroke there would be no piston motion at all during the bottom half of the crankshaft rotation. Following is a formula which will prove this.

Distance piston travels during first 90 degrees of C-S rotation from top d-c equals

$$\frac{S}{2} + R - \sqrt{R^2 - \left(\frac{S}{2}\right)^2}$$

Rod lengthR
StrokeS

Team up

with **BRADFORD TOOLS**

For Better Performance—Longer Tool Life



NEW!

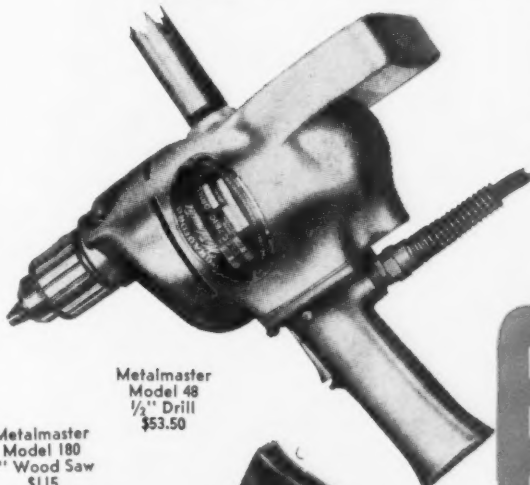
Metalmaster
TRIPLE TOOL

Model 3-4-1

SANDER • POLISHER • DRILL

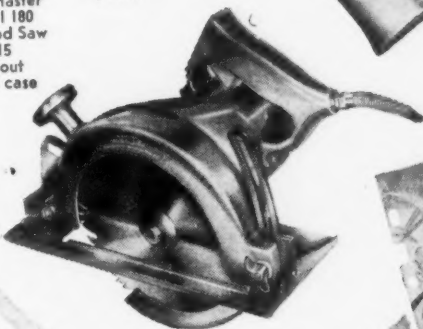
Quickly converts from 5" Sander-Polisher to 1/4" Drill. Accessories include 3 sandpaper discs, backing pad, wool buffer, 7B Jacobs chuck and key.

Price Complete \$48.75



Metalmaster
Model 48
1/2" Drill
\$53.50

Metalmaster
Model 180
8" Wood Saw
\$115
without
metal case



IN SHOPS where each tool investment must produce profits, Bradford Electric Tools are paying off. Each Bradford Tool model combines skillful engineering with top-quality materials. Their superior design results in smoother, easier operation for both worker and tool.

A background of more than 100 years in the manufacture of precision machine tools—lathes and special purpose drilling and tapping machines—stands behind the production of Bradford Tools. "Precision Since 1840" is Bradford's motto—make it your guide for getting the most from your tool investment.

Contact your nearby Bradford distributor for complete information on Bradford Tools designed to your work requirements. He will show you how Bradford Tools will make profits for your shop.

**PORTABLE ELECTRIC DRILLS • SAWS •
DISC SANDERS • BENCH & PEDESTAL
GRINDERS • BUFFERS • POLISHERS**

**WRITE FOR THIS NEW COMPLETE
CATALOG OF BRADFORD ELECTRIC TOOLS**



GIVES complete specifications on all models of Bradford portable electric tools; bench and pedestal grinders, buffers, polishers; tool attachments and accessories. This new Bradford Catalog will help you select the tools you need for time-saving production.



THE BRADFORD MACHINE TOOL CO.

Distributors in All Principal Cities

663 Evans Street . . . Cincinnati 4, Ohio

Newest Weapon of Science Produces Gas from Coal

Radioactive isotopes — one of the newest weapons of science — and many of the latest research techniques, are being applied in the study, being conducted by the Corporation's fellowship at Mellon Institute here.

The reason for the project is that the basic nature of the chemical reaction, by which gas-

oline is produced from coal, remains a mystery.

Sufficient technical knowledge exists to proceed with commercial production. But whether present methods approach, or fall far short of, the ultimate possibilities cannot be judged until what happens in the reaction is better understood.

The coal-to-gasoline development is based on the Fischer-Tropsch process, originated and

used in Germany during the war. It involves the production, from coal or natural gas, of hydrogen and carbon monoxide, which are then converted to gasoline by passing them over a metallic catalyst.

It has been assumed — but never proved — that such gasoline is produced by the reaction hydrogen with metal carbides of hydrogen with metal carbides (which have been formed during the process from carbon monoxide and the metal catalyst).

If, however, the gasoline is created by some reaction not involving metal carbide formation, as appears possible, the whole viewpoint on the process, and on its commercial application, might well be changed.

To trace this process scientifically, researchers on the project are using radioactive tagged atoms, or isotopes of carbon, called carbon 14. The carbon 14 atom has the same properties as the carbon atoms normally used — except that it is radioactive.

By sampling for the presence of the radioactive atoms in various stages of the process by a Geiger counter, the researchers hope to trace the course of carbon atoms, and blueprint the entire reaction.

The results, they believe, may have an important bearing on the future of the gasoline-from-coal program, with broad implications to the nation's fuel picture.

"IT USED TO TAKE A HIGH PRICED MECHANIC
FIVE HOURS TO DO THAT JOB—NOW WE DO IT IN
30 MINUTES WITH HYPRESSURE
JENNY STEAM CLEANER"*

That's what one garage owner says about cleaning car motors.

You too—for as little as \$368.00 —can put a full-powered, heavy-duty, all purpose Hypressure Jenny Steam Cleaner to work saving you time and money . . . increasing your shop capacity . . . winning customer approval.

Hypressure Jenny will pay for itself in a few months cleaning repair jobs before your mechanics start working on them, thus saving up to 40% of their time usually lost wiping dirt and grease from tools and equipment. Hypressure Jenny will keep your lifts, grease pits, floors, aisles, runways, walls, windows, skylights, lavatories, etc., clean as a pin, 10 times faster than you can clean them by hand.

Hypressure Jenny will make you extra profits flushing cooling systems . . . cleaning road dirt from chassis and springs . . . preparing cars for undercoating.



* Name on Request



HYPRESSURE JENNY, the original and leading steam cleaner, is sturdy . . . compact . . . portable . . . easily moved from job to job. It is economical . . . simple to use . . . ordinary labor can operate it.

MAIL TODAY

Fill out this coupon for FREE SURVEY of your cleaning requirements and estimated Hypressure Jenny Steam Cleanings.

**HYPRESSURE
JENNY DIVISION
HOMESTEAD VALVE
MANUFACTURING CO.**
"Serving Since 1882"
Coraopolis, Penna.

REQUEST FOR SURVEY

Hypressure Jenny Division
Homestead Valve Manufacturing Co., P.O. Box 95E, Coraopolis, Pa.

We employ . . . mechanics on repair work.

We overhaul or recondition . . . ☐ cars, ☐ trucks, ☐ buses each month.

We paint . . . ☐ cars, ☐ trucks, ☐ buses each month.

We wash approximately . . . ☐ cars, ☐ trucks, ☐ buses each month.

We're interested in cleaning ☐ floors, ☐ walls, ☐ windows, . . .

Based on above facts, please show us the savings or extra profit HYPRESSURE JENNY can produce.

Company . . .

By . . . Title . . .

Address . . .

City . . . State . . .



"Tell me again, Pop, how you hit seven homers in one game."

Want to make customers remember you?

CUSTOMERS don't forget a repair man when they know he uses top quality materials. And they'll know *you* use top quality materials when you point out the trade-mark "Timken" on the tapered roller bearings you install.

That's because "Timken" means highest quality to your customers. Dependable performance for nearly 50 years, plus consistent advertising, has made it the best known name in bearings. The very fact that you use Timken bearings shows the high quality of your service.

So, to make customers remember you . . .



... Just tell 'em it's "TIMKEN"®



Timken tapered roller bearings usually outlast the automobiles in which they're installed. They take radial and thrust loads in any combination, eliminate friction, hold wear to a minimum, and keep parts in positive alignment.

You find them in most leading makes of automobiles, trucks, tractors, and busses.

Makers of the first practical tapered roller bearing, The Timken Roller Bearing Company sets the standards for the industry. So why take chances with your reputation for topnotch service? Be sure the trade-mark "Timken" is on every tapered roller bearing you buy. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION

MAY, 1948

When writing to advertisers please mention Motor Age

157

W. E. Simons Is Made Heil General Sales Manager

The Heil Co., Milwaukee, announces the appointment of Wm. E. Simons as General Sales Manager of the company. Mr. Simons has been Sales Manager of the truck body and hoist division of the company for several years and now heads all six sales divisions.

Other executive appointments include: Harry F. Pugh, Vice President in Charge of Sales and Advertising; Arnold F. Meyer, Vice President in Charge of Engineering; Joseph J. Rosecky, Vice President in Charge of Manufacturing; J. F. Horn, Controller, Assistant Secretary and Assistant Treasurer; Earl C. Gilmore, Assistant Treasurer; Allan E. Magee, Assistant Secretary of The Heil Co. and Sec-

retary of Arnold Dryer Company; Ed Fellows, Jr., Director of Purchases.

M-19 Washing Compound Waxes As It Cleans

A newly developed auto washing compound makes possible a washing and waxing process in one operation, states the manufacturer, Allied Home Products Corp., Beloit, Wis. The compound, called Wax-E-Wash, has chemical properties, it is said, which permit its suspension in water so that the wax is evenly distributed throughout the solution. The manufacturer estimates 30 minutes to be sufficient time for the entire operation of washing and waxing. First, the entire car is rinsed with plain water. Then, the prescribed solution of Wax-E-Wash is applied with a sponge. Upon drying, a fine powder of wax is removed with a dry cloth, leaving a coat of protective wax.

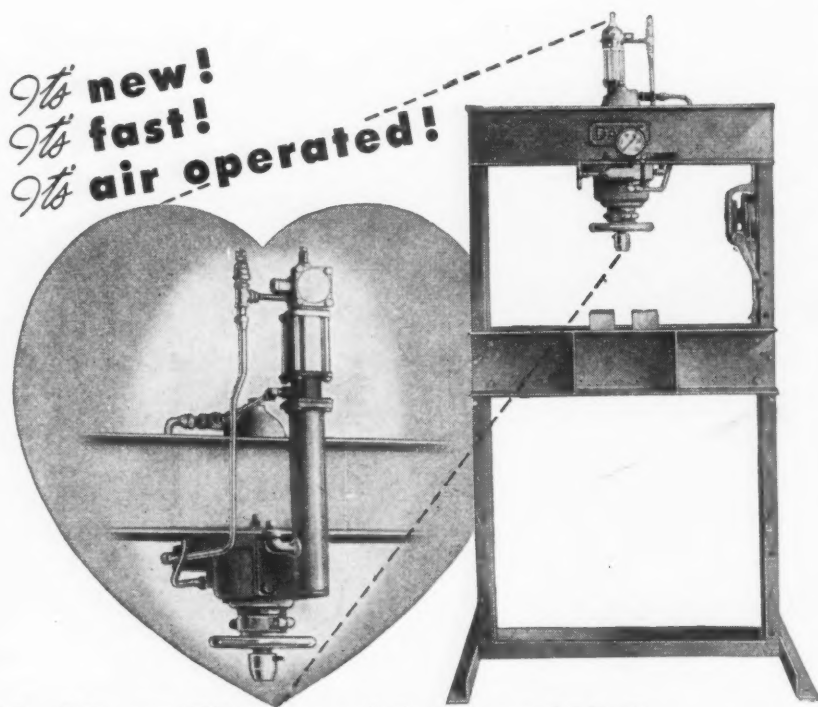
For more information use coupon on page 65.

Farmers Are Kaiser- Frazer's Best Customers

A recent Kaiser-Frazer survey based on 100,000 retail deliveries in 1947 states that farmers comprise their largest group of buyers. 15 per cent of the luxury line Manhattans deliveries were to farmers, and 14 per cent of all models. Salesmen bought 6 per cent, laborers 4.7 per cent, factory workers 4.2 per cent, housewives 4.1 per cent, Army personnel 2.7 per cent, retired persons 2.6 per cent, and contractors 2.2 per cent.



"Call that auto laundry and tell them the starter button is missing!"



25, 50, or 75 tons with 90 or 145 lb

... air pressure

Newest wrinkle in "quick pressure" is this Dake air-operated hydraulic press. Now every shop with a compressed air supply can have rapid press operation with no hand pumping. The air-operated motor shown in the inset provides speedy pressure, and is easily controlled

by a small hand valve.

This new press is available in 25, 50, or 75 tons capacity, and may be used with any 90 or 145 lb air supply. And the price is so low for an automatic operation that you'll be astonished! Mail the coupon today.

DAKE

airbor and hydraulic
PRESSES

Dake Engine Company
626 Seventh St., Grand Haven, Mich.

Please rush me details of your new air-operated presses.

Name

Company

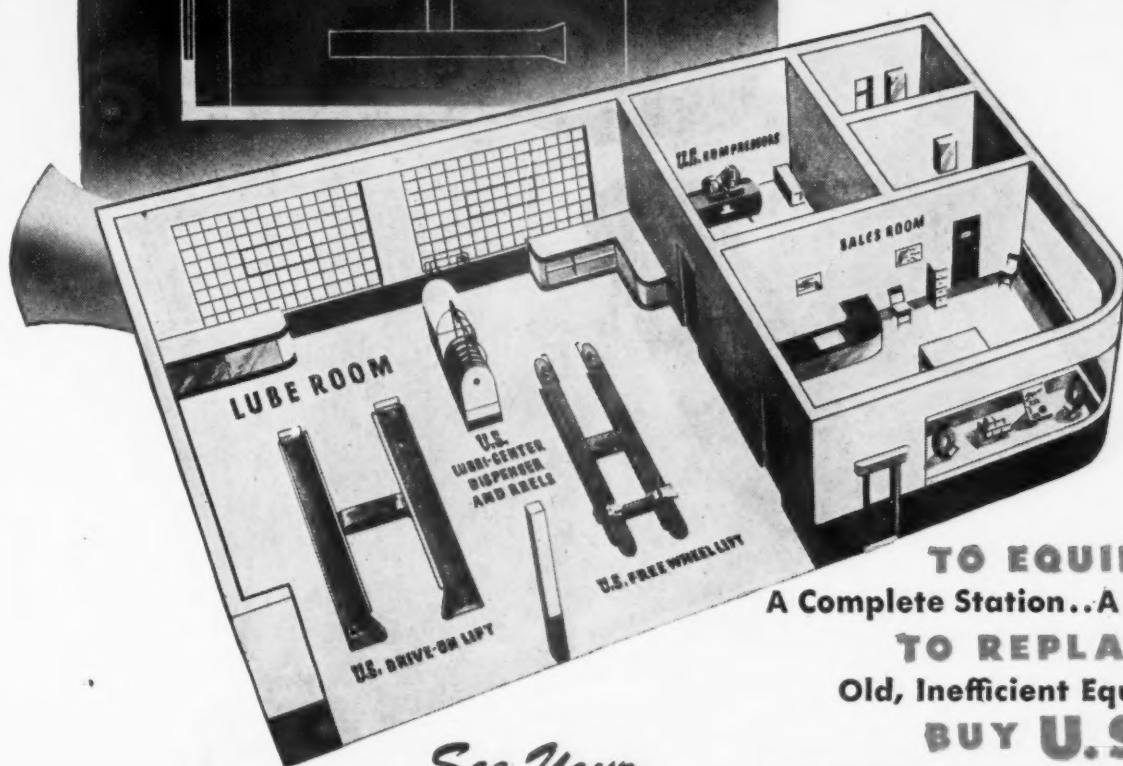
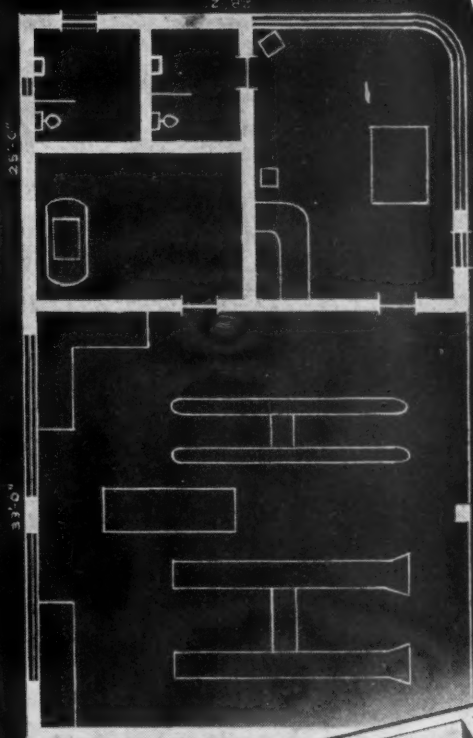
Address

City

EASY
TO FIT
ANY PLAN

U.S.

**AIR COMPRESSORS
HYDRAULIC LIFTS
LUBE EQUIPMENT**



TO EQUIP
A Complete Station...A Department
TO REPLACE
Old, Inefficient Equipment
BUY U.S.

See Your
U. S. jobber when you
make your plans



You can get a complete set-up of equipment to fit your exact needs with U. S.

Many models—all modern in design. Wide range of sizes—all engineered for top performance and long life.

Get all your equipment from one source.

THE UNITED STATES AIR COMPRESSOR COMPANY

5300 HARVARD AVENUE

CLEVELAND 5, OHIO

AIR COMPRESSORS • HYDRAULIC LIFTS • LUBRICATING EQUIPMENT • PNEUMATIC ACCESSORIES

Where



*The voice of Man has long struggled to defeat space.
The "magic horn" of Alexander carried his voice almost three miles!
Now, Radio towers like that of WCBS at the left,
send Man's voyaging voice everywhere.*

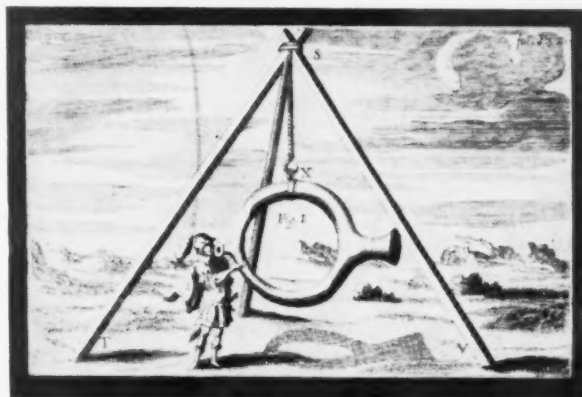
re do we go from here...

One frontier in Radio is almost entirely gone: the frontier of space. Wherever Americans live, they now own a radio and listen to it. Today the Radio set is an intimate furnishing of the lives of 93% of all the families in America. *What frontier, then, is left?*

It lies in what Radio can *say*, rather than where it can *go*. It lies in the nature and quality of Radio's programs... in the limitless field of Man's imagination and responsibility.

The evidence accumulates that CBS leads all Radio in pushing back this frontier—bringing 99,000,000 listeners each week CBS-produced programs which stake new claims on the American people's desire for entertainment, knowledge and inspiration.

As the New York Times put it in its annual summary of Radio's progress—"In original programming—CBS was far and away the leader. In a year marked by vapid talk... CBS actually did something..."



BETHMAN ARCHIVES

This "something" includes the CBS Package Programs, *the most exciting new hits in Radio*. Such sponsored shows as Arthur Godfrey, "My Friend Irma," Abe Burrows, Edward R. Murrow, "Strike It Rich"; such sponsorable ones as "Mr. Ace and Jane," Mickey Rooney in "Shorty Bell," Hoagy Carmichael, "Studio One," and many others.

Sponsored CBS Package Programs currently average 40% less in talent costs than other network programs.

So, for large audiences at low cost...at the *lowest* cost in network Radio today...see CBS.

Columbia Broadcasting System

—where 99,000,000 people gather every week



to sell the
NEW!

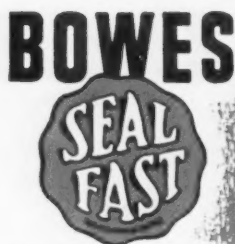


BOWES tire repair is the way to complete TIRE SALES & SERVICE

● Did you ever stop to think that you do business only with *friends*? Anybody who buys from you feels friendly toward you, or he wouldn't do it.

O. K.—how do you make friends? Here's one unfailing way. Take care of the fellow who needs a tire fixed, and take care of him *right*—with Bowes "Seal Fast" tire and tube repair, the kind you know will *stay put*. When that customer is ready for new tires, where does he naturally come? To you, his *friend*!

To get new tire business you have to deserve it. The way to deserve it is to give safe, dependable Bowes Repair Service. Get on the Bowes "Seal Fast" bandwagon *today* and watch your new tire business pick up!



**BOWES "SEAL FAST" CORPORATION
INDIANAPOLIS 7, INDIANA**

MEWA Appoints Trustees To National Association

John F. Creamer, Wheels, Inc., New York and Benton H. Rosen, Franklin Supply Co., Providence, R. I., prominent automotive wholesale distributors, have been appointed by President Frank K. Meyer of the Motor and Equipment Wholesalers Association to serve as Trustees to represent the MEWA in the affairs of the National Association of Wholesalers.

The National Association of Wholesalers was formed a year and a half ago as an organization to represent the interests of principal wholesale trades along lines similar to that of the National Association of Manufacturers. The MEWA was one of several wholesale trade associations which assisted in organizing the NAW.

Mr. Creamer and Mr. Rosen will serve along with B. W. Ruark, General Manager of the MEWA as Trustees representing the Automotive Wholesale Industry on the NAW's overall Board of Trustees.

Goodyear Introduces Two New Lines of Tires

Introduction of two new lines of passenger automobile tires for renewal sale was announced here today by The Goodyear Tire & Rubber Company. Names of the two new lines are Corsair and Marathon.



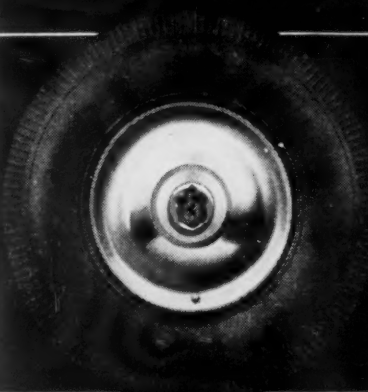
"Why in the world didn't you say you wanted the gas and water in separate tanks!"



World's leading producer of
distinctive wheel accessories

presents

*Three New Appointments
in Stainless Steel*

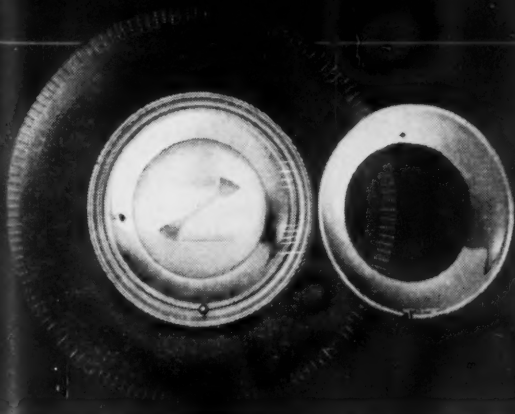
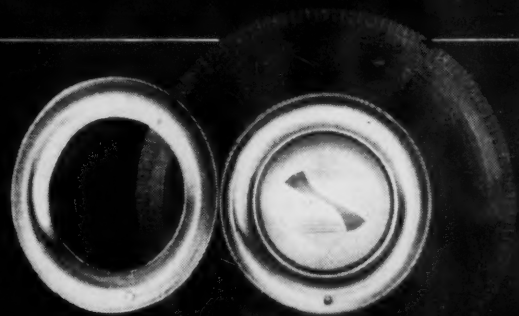


The New De Luxe Wheel Cover

Beauty and utility combined! This rich-looking wheel cover is attractively adorned with a distinctive and colorful medallion. A fine product made for the man who takes pride in his car. Two sizes fit all 15" and 16" wheels. List price \$19.95 per set of four.

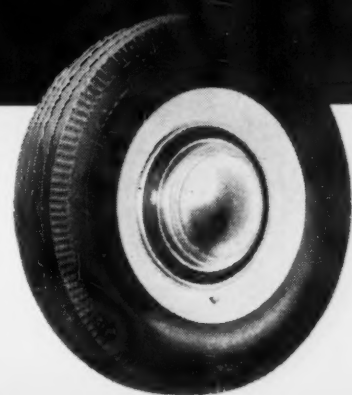
The Smart New Wheelwall

A big seller that dictates the style trend for '48. Glistening trim from hub cap to rim. Achieves over-all stainless appearance by using owner's original hub caps. Three sizes for 16" wheels—two sizes for 15" wheels. List price \$11.95 per set of four.



The New Wheel Crown

An excellent item for millions of drivers whose cars are equipped with factory-installed stainless steel trim rings. They fill the gap from trim ring to cap. Two sizes for 16" wheels only. List price \$9.95 per set of four.



... new style partners to *America's Favorite Whitewall*

Here are four good items for profit-wise dealers . . . a product to suit the taste and pocketbook of every customer . . . all made to the same exacting standards of the famous Whitewall. Wise dealers buy them, display them, talk them and sell them. . .

The practical Lyon Whitewall already is on nearly 4,000,000 cars. Canada's enterprising dealers have every right to expect comparable acceptance of Lyon's smart new wheel accessories in stainless steel. Distributed in Canada through major tire companies and authorized jobber outlets.

LYON INCORPORATED • 13881 W. CHICAGO BLVD. • DETROIT 28, MICHIGAN

Mail This Coupon

Another powerful message to the motor car owners of America will appear in the July 10th issue of Collier's. Millions of car owners...from coast to coast...will be told why they should go to their service man for a "Summer Safety Check-Up."

The motoring public will be forcefully reminded that a peak of automobile accidents is reached in July and August; that the driving risk is greater in summer because highways are more crowded and cars are driven farther and faster.

But what does all this mean to *you*?

Exactly this. Many people right in your own neighborhood...some of your own customers and others you would like to have as customers...will read the Summer Safety Check-Up article in Collier's. They will be impressed with the need to do something. BUT...human nature being what it is...many of them won't do anything unless YOU either write or talk to them about it.

And that's where we can help you.

Just tear out the coupon and mail it to Collier's Promotion Dept., 250 Park Avenue, New York 17, N. Y. We will immediately send you complete information on the best way to get more of that Summer Safety Check-Up business.

Collier's P. S. gets business for dealers who tie in with it;

Collier's P.S.

Preventive Service

When writing to advertisers please mention Motor Age

MOTOR AGE

h to Collier's

Today

COLLIER'S PROMOTION DEPT.

250 Park Avenue

New York 17, N. Y.

Gentlemen:

Please send me complete information on the best way to cash in on the Summer Safety Check-Up article appearing in the July 10th issue of Collier's.

I would like to tie in with the Collier's Preventive Service Program.

Very truly yours,

NAME _____

STREET & NUMBER _____

CITY & STATE _____

**Just sign your
name and address
here. Slip into an
envelope and mail
TODAY!**

Here's WHY They're Buying INLAND Tires



"I've heard about the kind of service and mileage my friends are getting with Inlands."

"I've never had a better tire on my car—it's my third set of Inlands."



"I don't buy just a tire—I buy mileage. The Inland tire has the 'guts' to take tough driving on country roads."



"My husband says that a tire backed up with a written warranty like Inland's has to be good."



"If anything happens to my tires I know my Inland Dealer will take care of me fair and square . . . and without waiting."



INLAND RUBBER CORPORATION

Tire Builders Since 1913

Here's WHAT They Buy From INLAND Franchised Dealers

A WRITTEN 15 MONTH WARRANTY with every Inland Passenger Tire. You back up this great tire with one of the strongest, fairest warranties in America full coverage against all road hazards—no mileage limit.

NO DELAY...NO RED TAPE on adjustments. You're the boss. You make your own adjustments on the spot in a matter of minutes ... that cost you nothing ... keep your customers happy. We stand behind every decision you make.

A FIRST LINE TIRE that delivers the kind of mileage, safety and comfort you promise your best customers. It's built to take it with features like these that mean happy, satisfied motorists: Inland Cool Twist* heat-fighting rayon cord; quick-stop, sure-stop, 8-rib tread; extra-strong, tough, live-rubber carcass.

START AT ONCE

Inland Franchises are arranged through leading Automotive Distributors everywhere east of the Rockies. Be the first in your community to get one. Call your Inland Tire Distributor today... or send us your name and address.

*T.M. Inland Rubber Corporation

**INLAND
TIRES**
Take to the Road



INLAND RUBBER CORPORATION

144 W. 27th Street, Dept. 4415 Chicago 16, Illinois

(ADVERTISEMENT)

Another "Success Story" on Carburetor Cleaning

... Using Magnus 755 and the Aja-Dip Jr. Machine

A midwestern auto dealer with a fairly high volume of engines and parts to clean daily installed a Magnus Aja-Dip Jr. Cleaning Machine some time ago. This was to be used for carburetors, fuel pumps and similar parts.

NEW CLEANING IDEAS

For Further Details Write Magnus

Pre-Cleaning with Magnusol Saves Time and Materials in engine block cleaning operations. You spray the block with a mixture of one part Magnusol to six parts kerosene or safety solvent, and let soak for a few minutes. Then spray off with hot or cold water under pressure. You have removed 90% of the dirt, keeping it out of the cleaning tank or machine, and making for much faster cleaning in the bargain. No. 105

The New Speed Cleaning Combination for Heavy Dirt—61K and NXL. Magnus 61K is a heavy duty liquid alkaline cleaner. NXL is a super wetting agent, geared to work well in 61K. When 1/2 oz. NXL per gal. is added to a 61K solution, you get greatly increased speed in cleaning, plus materially better quality. And liquid 61K never cakes in the drum! No. 106

Looked into Magnus Carfoam Yet? You'll be surprised at the kind of body cleaning job it does—and at the short time and minimum labor involved. No. 107

Try Magnusol for Extra Greasy Floor Cleaning

Although Magnus Cement Cleaner has been for more than 20 years a standard compound for garage floors, there are many shops where extra oily dirt deposits call for extra cleaning activity. Magnusol, mixed one part to 10 with kerosene (or safety solvent), brushed on the floor, allowed to soak in a few minutes, then hosed off with cold (or warm) water, will keep these greasy floors clean, where ordinary cleaners fall down.

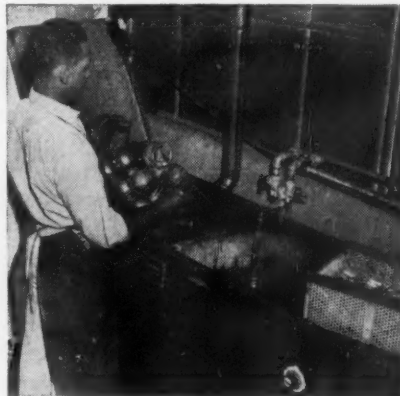
More About Magnus Metaffin for Sludge Control

Many lubricating engineers have suggested that modern oil refining practices remove fractions from lube oil which are quite valuable for their effect on oiliness and resistance to oxidation. These fractions may be undesirable for their effects in sludge formation, but according to these engineers, their removal beyond a certain point, as is done in modern lube oils, is definitely detrimental.

If this is so, then Magnus Metaffin is all the more desirable for treating lube oil. For it not only prevents sludge formation in all oils, but restores the "oiliness" removed by the refining operations discussed above.

But instead of using Magnus 755 in the Aja-Dip Jr. Machine, they started with a competitive cleaning material. Naturally the superior agitating action of the Aja-Dip Machine gave them faster cleaning than they could get by other means, but they were using up more than a drum a month of the competitive carbon remover to do the job.

We showed them that a drum of #755 would not only last from 3 to 6 months in the Aja-Dip Machine, but that they could filter it after it had served its purpose in this machine, and



use the solution in a soak tank for pre-cleaning all kinds of small parts.

Today they are using Magnus 755 exclusively. In fact, they are still on their first drum of this unique cleaner, although it is well into the fourth month of service.

They had a somewhat similar experience with their hot tank for block cleaning. They formerly used an ordinary alkaline cleaner here, and it took over four hours in the tank, plus nearly a half hour of hand work to get a reasonably clean block.

Now they use Magnus 61K plus a small amount of NXL in the hot tank. The block is first pre-cleaned with Magnusol and rinsed before putting into the hot tank. Then a 45-minute soak gives them a perfectly clean block with no hand work. And the 61K plus NXL solution lasts them five times as long as the cleaner they used to use!

Magnus Chemical Company, 174 South Ave., Garwood, N. J. In Canada—Magnus Chemicals, Ltd., 4040 Rue Masson, Montreal 36, Que. Service representatives in principal cities.



IN THE AUTOMOTIVE FIELD IT'S

Magnus

CLEANERS • EQUIPMENT • METHODS

Lloyd J. White Heads Dodge Training Program

Appointment of Lloyd J. White to direct the new continuous sales training program being set up by the Dodge Division of Chrysler Corporation for the passenger car and truck divisions was announced today by E. C. Quinn, general sales manager.

The comprehensive program will include selection of qualified personnel, both product and sales training for home office personnel and field staffs, and assistance to the 4,000 Dodge dealers in training their staffs.

White has had 25 years of diversified experience in automotive sales and service work.

Drew Appoints Harris As Sales Manager

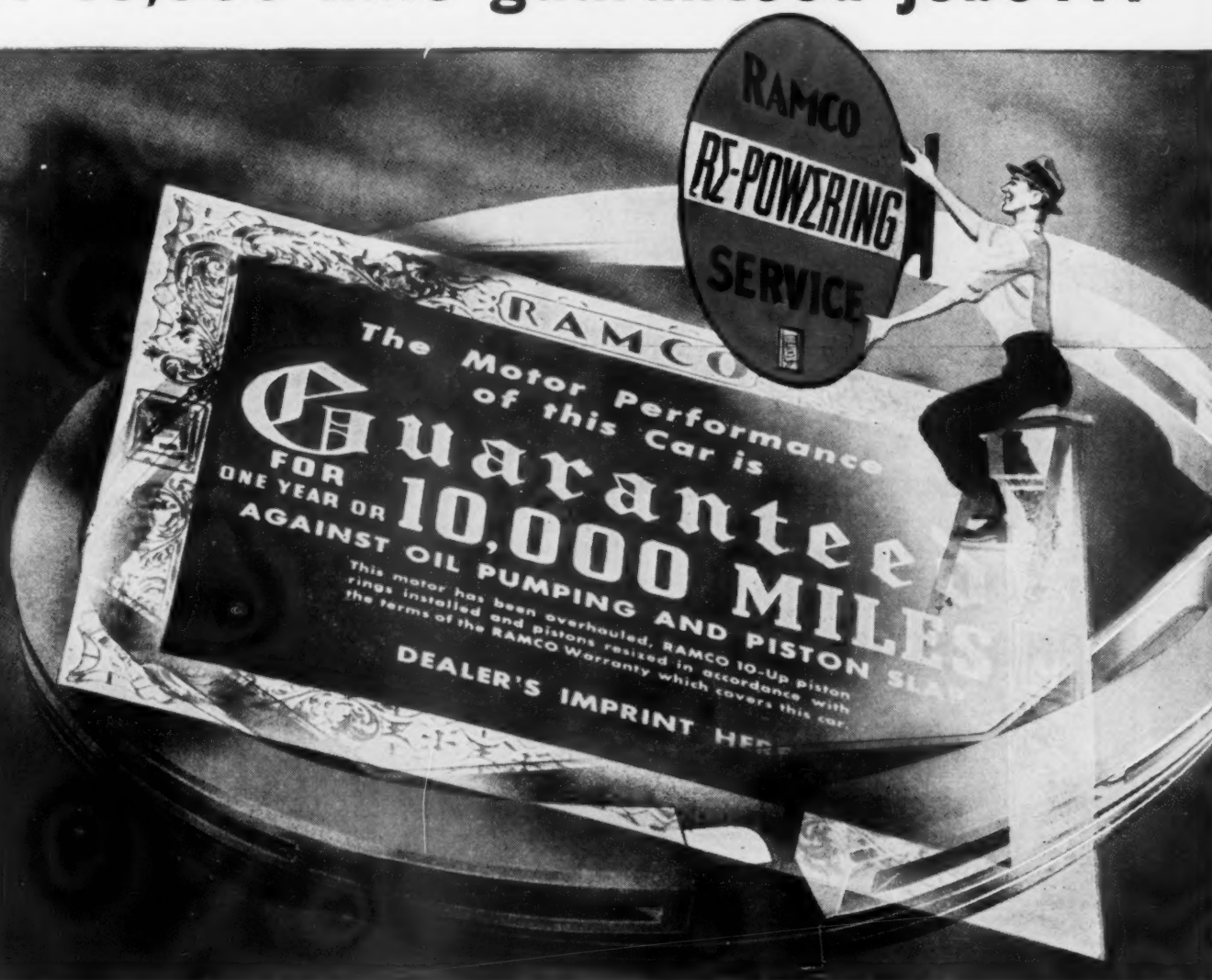
E. F. Drew & Co., Inc. announced the employment of Sidney G. Harris as Sales Manager of the Automotive Division of the Drew Organization. His connections in an administrative capacity have been with such well-known organizations as Continental Motors Corporation, Detroit; Macmillan Petroleum Corporation, Los Angeles; and Petroleum Solvents Corporation, New York City.

The company expects to accelerate its sales activities under the "Ameroid" trade mark in the automotive chemical field.



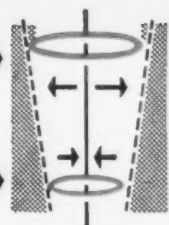
"Don't ever eat a mystery novel!"

get the **REP**
for 10,000 mile guaranteed jobs...



Spiro-Seal is UNWOUND
at top of taper here →

but Spiro-Seal is
WOUND-UP here →



How UNWINDING ACTION of Spiro-Seal helps build your "REP"

In tapered cylinders, on the downstroke, the Spiro-Seal ring compresses—winds up like a clock spring. On the upstroke it unwinds, but with a lag. This alternating action makes Spiro-Seal self-regulating in control of oil and self-adjusting to taper WITHOUT harsh pressure at any point.

With betterments like this Ramco is able to guarantee your Ramco 10-Up ring jobs for 10,000 miles and advertise them nationally in Saturday Evening POST and COLLIER'S. The Ramco RE-POWERING Sales Program sells all four: Compression, Ignition, Carburetion, Cooling. If you do not have the RAMCO RE-POWERING franchise your RAMCO JOBBER can help you get it.

RAMCO

RE-POWERING

your answer to RE-ring and RE-bore, car or truck

As profit-wise Service Men know, the best "price" buy in RE-POWERING is the 10,000 Mile Guaranteed Ramco 10-Up Job. The guarantee assures the car or truck owner of a job that's worth the price, and that builds your "REP" for doing the job right, and THAT builds your bank balance.

for 10,000 miles and UP
CALL for **RAMCO 10-Up** piston rings

... the 10,000 Mile Guaranteed Rings for Re-Bore and Re-Ring, Car or Truck
Products of Ramsey Corporation, makers of a complete line of piston rings for all automotive and industrial requirements. Factories: St. Louis and Sullivan, Mo.; Fruitport, Mich.; Toronto, Ont., Canada.
R-2734—Copyright 1948 Ramsey Corporation



FIG. 732 "HALLOWELL" READY-MADE WORK BENCH OF STEEL

HALLOWELL

READY-MADE SHOP EQUIPMENT OF STEEL

"Hallowell" Ready-Made Shop Equipment of Steel is hitting an all-time high throughout industry. It's sturdy, all-steel and fire-resistant construction with welded or hydraulically riveted joints means years of service life and reduced fire hazard. The popular "Hallowell" Line includes: Work-Benches, Foreman's Desks, Tool Stands, Stools, Chairs and Trucks—all of unusual convenience and neat appearance.

The ready-made "Hallowell" Work-Bench of Steel, to mention but one item on account of space, is the ideal bench for **your** shop. Get this—"Hallowell" Benches have steel tops; are also available with laminated wood tops; or steel tops covered with "Tempered Presdwood". The "Hallowell" is made in 4 standard heights, 3 widths and 7 lengths . . . does **not** require costly bolting to the floor; can be easily re-arranged as individual units, or can be joined to form a continuous work-bench. Attractive prices and deliveries . . . ask for the "Hallowell" Catalog.

Write for the name and address of your nearest "Hallowell" Industrial Distributor.



FIG. 1855

"HALLOWELL" TOOL STAND of steel may be had with rubber-tired casters.



FIG. 2197
"HALLOWELL"
FOREMAN'S DESK OF STEEL

OVER 45 YEARS IN BUSINESS

STANDARD PRESSED STEEL CO.

JENKINTOWN, PENNA. BOX 561

BOSTON • CHICAGO • DETROIT • INDIANAPOLIS • ST. LOUIS • SAN FRANCISCO

Brush and Cunningham Promoted by Raybestos

Jerome W. Brush, Jr., has been appointed Assistant Director of Marketing and Merchandising, a newly-created department of Raybestos-Manhattan, Inc., with offices at 120 Broadway, New York City, which will coordinate and supervise the merchandising policies, advertising, market research and analysis, public relations and publicity programs of the corporation's several divisions on their asbestos and automotive rubber products.

David E. Cunningham will succeed Mr. Brush as Marketing Supervisor of The Raybestos Division, Bridgeport, Conn., and will direct divisional activities in conjunction with the corporation's Marketing and Merchandising Department.

Requests for Hudson Dealerships Increase

The introduction of the new Hudson was accompanied by a 300 per cent increase in the number of requests for Hudson distributor and dealer franchises, reports N. K. VanDerzee, sales manager of the Hudson Motor Car Company.

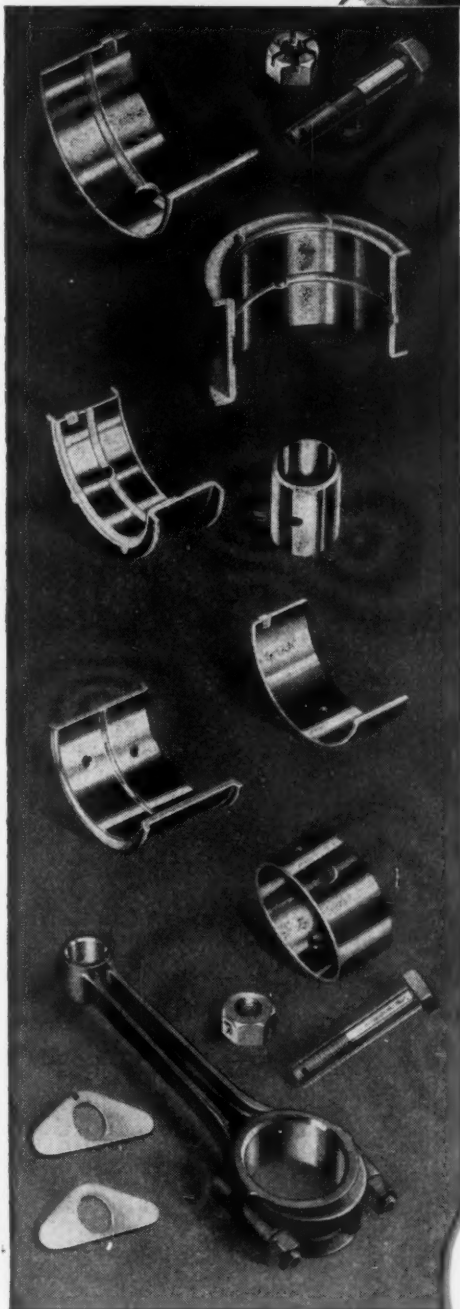
"Requests for dealer franchises made by mail to the Hudson sales department began to increase during the new Hudson publicity build-up campaign," VanDerzee said.



"Be right with you, Ed!"

BEARINGS

for OLD TIMERS?



Ask Your Federal-Mogul Jobber

There are still a lot of old timers on the road that give plenty of miles with proper engine reconditioning—when you can find the right bearings. That's where we shine. The 100% complete Federal-Mogul line includes numbers for old timers that go back through 1925.

It's just part of the complete bearing service we have been building up for you over the years . . . so that you need make just ONE call for ALL of your bearing needs—ask your Federal-Mogul jobber!

Back of him are our six modern plants, turning out millions of bearings each year . . . our 57 branches and warehouses across the country . . . that's why he can give you prompt service on service bearings for the engine built last year or one built by the last generation.

FOR EVERYTHING IN BEARING SERVICE — ask your Federal-Mogul jobber!

FEDERAL-MOGUL SERVICE • COLDWATER, MICHIGAN
DIVISION OF FEDERAL-MOGUL CORPORATION

When Performance Goes up in Smoke



Replace in Sets with Genuine
FEDERAL-MOGUL
Oil-Control Bearings



*The Complete Line—
Almost 7,000 numbers:*

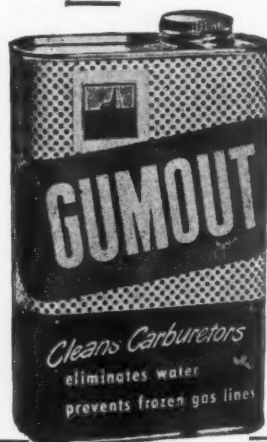
Engine Bearings • Bushings • Connecting Rod Exchange • Reconditioned Connecting Rods • Rebabbitted Connecting Rods • Connecting Rod Bolts and Nuts • Bearing Metals • Laminated Shims • Solders

Penn Drake

GUMOUT

BEST for your customers!

BEST for you!



CLEANS CARBURETORS

- Prevents gum damage
- Absorbs moisture in gasoline
- Reduces carbon formation
- Makes starting easier
- Maintains peak motor efficiency

It's true that many products are now advertised to do some of the many things which Gumout does to perfection.

However, in weighing Gumout against common gasoline anti-freezes and water absorbents, remember this: while Gumout will match the freeze prevention and water elimination properties of any product, its big, year-round job is to CLEAN CARBURETORS and fuel systems.

Gumout is composed of 100% active ingredients . . . powerful, undiluted solvents. One pint to ten gallons of gas, once a month or every 1,000 miles, dissolves all harmful gum and foreign deposits. Gumout keeps carburetors and fuel systems sparkling clean . . . operating efficiently and economically throughout the year.

Motorists buy Gumout, like it—and buy it again. Because Gumout is best for your customers, it's best for you always!

Jobber inquiries invited.

PENNSYLVANIA REFINING CO.

2687 Lisbon Road Cleveland 4, Ohio
Butler, Pa. Edgewater, N. J.

Portable Self-Operating Spot-Welder by Greyhound

A lightweight portable, self-operating spot-welder is now being made available by the Greyhound A. C. Arc Welder Corporation of New York. Capable of welding up to 1/8 inch combined thickness of metal this self-operating unit is enclosed in a non-corrosive cast aluminum casting. The protruding copper arms are available in three lengths, 6, 12 and 18 inches and special alloy tips are available in an assortment of shapes for specific needs.

Westinghouse Reflector Lamps for Limited Space

Two new 75-watt, hermetically sealed, internal reflector lamps have been developed by the Westinghouse Lamp Division of Bloomfield, New Jersey. One, a reflector flood and the other, a reflector spot type, supplement the standard 150-watt R-40 bulb reflector flood and spot lamps. These lamps are designed to be especially useful in lighting applications where limited space is available.

Automatic Stock Charger Manufactured by Willard

The Willard Storage Battery Company has developed a new device to keep large wholesale stocks of storage batteries automatically in fully charged condition. Willard has named this device the "Willard Stock Preserver" and states that a single Stock Preserver will maintain as many as 50 stock batteries in fully charged condition without attention for three months.

"MAC" SOCKETS and ATTACHMENTS

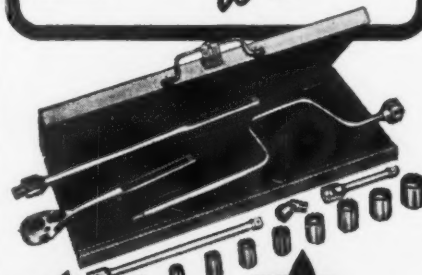


SET No. SV22

All "MAC" sockets are true forged. This method of manufacturing allows them to be made with a smaller outside diameter stronger than average, and with deeper splines. All sockets and attachments now available in both the 2 1/2" and 1 1/2" service and can be had with either 6 point or 12 point openings.

THE MECHANIC'S TOOL & FORCE CO.
SABINA, OHIO

Quarter to One!



That's the wide range of drive sizes — 1/4" to 1" — offered in the popular socket wrench sets made by Plomb Tool Company

Do you need a mid-get 1/4" drive socket wrench set for speedy nut running on carburetors, radios or other small equipment? Or do you need an extra heavy-duty 1" drive set for large bolts and nuts on big vehicles and machines? Regardless of your requirements, you'll find the right set among the many types made by the Plomb Tool Company. You can get big sets with a wide range of socket sizes, or you can buy inexpensive basic sets which contain only the most-used sizes. The sockets, handles and attachments



in all of these sets are of the highest quality obtainable—accurate, superior in design, made of the finest alloy steels, and noted for long life. Buy them today from your Dealer.

4882

PLOMB TOOL CO.

2226T Santa Fe Ave., Los Angeles 54

NOW! 30 Matched Brake Sets Fit 448 Models of Cars!



**...and that means
less investment, fast turnover,
quicker sales, more profits!**

Think of it! Now you can sell one top-grade line of brake lining that fits the need of almost every car. You know each set is made uniformly to highest General Motors standards of quality. Your customers know what that means too! And each set is matched to have the frictional values for the brake and vehicle for which it is designed. Add it up... it means better business for you!

**ORIGINAL EQUIPMENT
QUALITY!
•
ONE TOP-GRADE LINE,
NO SECONDS!
•
PRE-SOLD MARKET!
•
SATISFIED CUSTOMERS!**

A General Motors Product



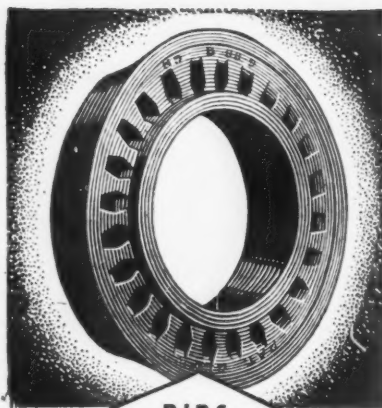
A UNITED MOTORS LINE
Available Everywhere Through
United Motor Service Distributors

INLITE *Brake Linings*

INLAND MANUFACTURING DIVISION, General Motors Corporation, DAYTON, OHIO

MAY, 1948

When writing to advertisers please mention Motor Age

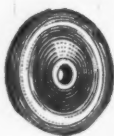


**RIBS
MOLDED INTO CUP
ADD PROPER
WALL TENSION**



ANODIZED PISTONS

EIS Pistons, made of aluminum, are now anodized (surface-hardened), as a protection against abrasion and corrosion.



BOOT

New type, larger than old style, provides greater flexibility, better breathing.

From your jobber. Write us for full particulars.

THE EIS AUTOMOTIVE CORP.
MIDDLETOWN, CONN.

Improved WHEEL CYLINDER CUP by for CHRYSLER-BUILT CARS

RIBBED CONSTRUCTION works two ways to give better sealing: (1)—by exerting greater pressure on the cylinder wall; (2)—by forcing the inner wall of cup more firmly against piston hub.

A better seal between cup and cylinder wall also is made possible by concave rim of cup, which forms a flexible lip. Made of highest grade crude rubber machined to a close tolerance for an absolutely accurate fit.

COMPLETE WHEEL CYLINDER KIT

Contains new Ribbed Cup, anodized Piston and new Boot. Replacements made with an EIS Kit insure a satisfactory, trouble-free job, without comebacks.

**BRAKE PARTS
BRAKE CABLES
BRAKE TOOLS
BRAKE FLUID**



Sherolite Coating Does Not Harm Synthetic

GMC is distributing a water repellent ignition seal developed by Sherolite Products, Inc. of Caldwell, New Jersey. Functioning primarily as a protective coating on metals, wires and electrical systems against corrosion and damage effected by water, condensation, leakage, acid, fungus and rust. Sherolite is a thin liquid applicable by spraying or brushing at room temperature. Containing no petroleum derivative, Cherolite neither attacks nor softens Synthetic rubber, such as hose connections, grommets or wiring insulation of low rubber content.

Teleoptic Signal Kits Available for Plymouths

Directional signal conversion kits for Plymouth cars are now available through the Teleoptic Company, Racine, Wisconsin. These kits convert the regular parking and tail lights into combination lamps including directional signals. They can be installed by any service station or garage mechanic.

Motor Flush Removes Sludge and Deposits

A new solvent and detergent compound for engine flushing has been developed by the Gulf Oil Corporation for preventive maintenance use in motor fleet operations. "Gulf Motor Flush," as the preparation is named, is designed to remove sludge, lacquer, varnish and deposits from gasoline carried by lubricating oil through the engine.

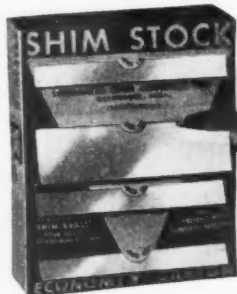
Shim stock ... IN HANDY DISPENSING CARTONS

Easy and convenient to handle and use are these cartons of shim stock that have been specially designed to save you time and temper. The paper-thin material is protected from damage in handling that results in wasted stock.

ECONOMY CARTON. Four rolls, brass or steel: .001, .002, .003 and .005. Each roll 6 x 50 inches... 1200 square inches of precision shim stock. Shim material is pulled through slots in carton and snapped. No miking. And, the rest of the roll remains in the carton instantly ready when needed.

These cartons can be set on the bench, stored compactly in bins or drawers, or hung on the wall. Always handy.

All Laminated Shim Company packaged shim stock is handled by established auto and industrial supply distributors.



3033

LAMINATED SHIM COMPANY
INCORPORATED
GLENBROOK CONNECTICUT



*See why DURO sockets
are up to 25% stronger*

"Doggone
Good Tools"



CONVENTIONAL
SOCKET



Wide Difference in
Wall Thickness

DURO
SOCKET



Uniform Wall
Thickness

DURO CHROME

walls have
UNIFORM thickness

Compare these actual photographs of a conventional socket, purchased at tool store, and a standard Duro Socket. They show why you can heft all of your weight against a near-frozen head nut without wondering if a Duro Socket is going to break.

A socket can be only as strong as its weakest spot—and that's why the teeth in Duro "Hot Broached" Sockets are

precision-formed. No cracking at a weak spot with these sockets! Socket walls are thin and uniform, enabling you to get in those hard-to-reach places, but they'll take all the strong-arming you can give them on the toughest jobs. Mechanics call them "Doggone Good Tools."

Duro's exact-center broaching operation is done while the metal is red hot. This method of making socket teeth is better workmanship and avoids the tears, stresses and cracks caused by cold broaching which may cause socket failure. With their hidden qualities of greater strength and durability, Duro Sockets are up to 25% stronger than conventional cold broached sockets.

EXTRA DURABILITY is built into all Duro-Chrome Tools. And here are still other reasons why you'll find Duro-Chrome Tools your best shop helper:

1. **BALANCE**—Tools are designed for lightness and strength—easy to use.
2. **PRECISION FINISH**—Surfaces are highly polished, chrome plated without sharp edges.
3. **EASY GRIP**—Handles are formed to provide a positive grip even when working in grease. Sockets have a small retaining groove in each of the four inside walls to hold the socket to the handle . . . no special positioning necessary, saves time.

DURO TOOLS (HAND TOOL DIVISION)



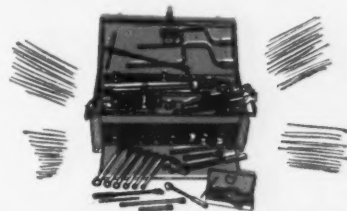
The Mechanic's Best Friend
OVER A BILLION BUILT SINCE 1916

ALSO MAKERS OF DURO MACHINE TOOLS

DURO METAL PRODUCTS CO., 2649 North Kildare Avenue, Chicago 39, Illinois



The **NEW** 80-tooth-action Duro Ratchet Wrench gives positive turns on take-ups as narrow as five degrees.

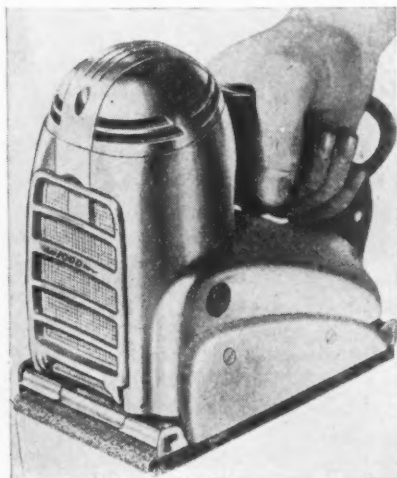


One of the many fine Duro Tool Sets, the 77-piece set shown here is contained in a heavy drop-front box, with a handy Lift-out Tray. Every tool easily accessible, with room for extra equipment too. Your jobber may have these chests in stock now . . . see him today!

R-2695

Sterling Electric Sander Has Improved Its Design

An improved version of the Sterling Portable Electric Sander has been made available by Sterling Tool Products Company of Chicago. New side housing



fenders, prevents scuffing when sanding in close quarters and gives added protection to the transmission. These sanders are now standard equipment and all

Sterling sanders. In addition an air scoop that gives protection in extremely wet or dusty sanding operations has been fitted and has an auxiliary handle or knob which attaches to the top of the housing.

Classified Advertisements

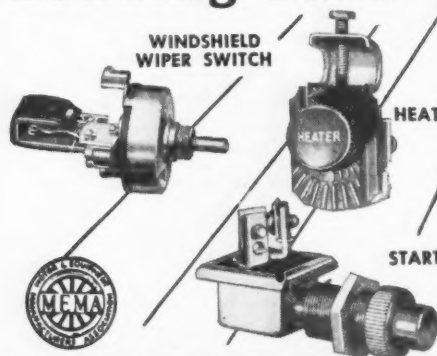
Unusual opportunity for aggressive salesmen. Quick selling specialty. Every service station and garage needs two or more. High commission. Side line permitted. Write Box 579, Realservice, 110 West 34th St., N. Y. 1, N. Y.

Business cards printed \$3.50, emboss process \$4.50; ruled statements \$4.50; letterheads \$8.50. Postpaid, quantities of 1,000. Also book and catalog printing. Wetzel Publishing A, Los Angeles 13, California.

FOR SALE — BEAR CONVERTIBLE ALIGNMENT RACK AND AXLE PRESS. REFINISHED AND LIKE NEW—\$600.00. FRANK LALLY, 5919 LANSDOWNE AVE., PHILADELPHIA 31, PA., TRINITY 7-6612.

IGNITION TESTERS: coil-condenser, attractive instruments. Regular \$42.50, close-out \$12.95. Moneyback guarantee. Box 21, Motor Age, 5601 Chestnut Street, Philadelphia 39, Pa.

A Replacement by COLE-HERSEE Restores original equipment to Leading Cars



HEADLIGHT SWITCH

MANUFACTURERS OF

Headlamp Switches
Starter Switches
Heater Switches
Panel Switches
Trailer Connectors
Plugs & Sockets
Toggle Switches
Push Pull Switches
Line Connectors
Foglight Switches
Door Switches
Fuse & Junction Blocks
Pilot Lights
Ignition Lock Switches
Accessories

QUALITY AUTOMOTIVE ELECTRICAL EQUIPMENT BY
COLE HERSEE CO.
20 OLD COLONY AVENUE BOSTON 27, MASS.

MILEY BLACK GOLD Metallized BRAKE LININGS

are guaranteed not
to score brake drums

L. J. MILEY COMPANY
18 S. Sangamon St., Chicago 7



MOOG INDUSTRIES INC.
ST. LOUIS, MO.

AUTOPULSE ELECTRIC FUEL PUMP

- Used in any car or truck
- No vapor lock
- Instant starting
- No stalling in traffic
- Greater fuel economy
- Added protection



AUTOPULSE CORP., LUDINGTON, MICH.

DUNK 'EM IN GUNK H'S

COMPLETE DECARBONIZING
PROCESS
IN PACKAGE FORM

IMMEDIATE DELIVERY
1 GALLON OR A
TANK CAR

CURRAN CORP. LAWRENCE, MASS.

DESOTO

owners agree:

It's wonderful to have the car that lets you drive without shifting. And they agree it's great to get the added comfort and protection that come with Super-Cushion Tires on Safety-Rim Wheels.

Tune in "Adventure with Christopher Wells"

Every Tuesday Night on All Columbia Stations

Cal-Van
GARAGE TOOLS

2 and 3 FINGER TYPE

THREE-IN-ONE PULLER

WRITE FOR CATALOG

NO. 10 TIMING GEAR PULLER

GEAR PULLER

CARBON SCRAPER
LIGHT BULB PLIERS
RING COMPRESSORS
CREEPER CASTERS
BUSHING REMOVERS
REAMERS

Cal-Van
MACHINE PRODUCTS, INC.
JACKSON, MICHIGAN, U.S.A.



Smash-Proof
CREEPERS

Sold by all leading jobbers

HULBERT MANUFACTURING CO.
Ashtabula, O.

When in DETROIT

Stop at Hotel Wolverine. Centrally located on Elizabeth Street, a block east of Woodward, overlooking Grand Circus Park. Five hundred rooms, each with tub and shower. Good food. Ample parking space—garage service. Home of THE TROPICS, most unusual night spot in Detroit.

HOTEL WOLVERINE
"The Goodwill Hotel"

RATES FROM
\$2.75 SINGLE • \$4 DOUBLE

The NEW Exide

The dependable battery that millions of car owners want.

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32
Exide Batteries of Canada, Limited, Toronto

WHEN IT'S AN EXIDE...YOU START



CAMPBELL
Lug Reinforced
TIRE CHAINS
THE CHAIN WITH THE SAW TOOTH GRIP

U.S. Pat. No. 2,093,547 — Canadian Pat. No. 223,568

INTERNATIONAL CHAIN & MFG. COMPANY
YORK, PENNSYLVANIA

AC Spark Plug Division Offers Flexible Lines

A new product, flexible lines for gasoline, grease, vacuum, oil filters and oil gages, has been placed on the market by AC Spark Plug Division of General Motors. A new wall merchandiser containing an assortment of "ready made" flexible lines to cover practically the entire market is also being made available to the trade. A flexible hose make-up kit, consisting of bulk hose and attachable fittings enabling the mechanic to provide flexible lines of any size is also available in a steel box with complete instructions for assembling printed on the cover.

Du Pont Tire Black, and Power Polish Offered

Two new products for car care has been announced by the Du Pont Company. They are Du Pont Tire Black, a ready-mixed liquid dressing for use on tires, rubber mats and running boards and No. 7 Power Polish, a compound for use with electric automobile-polishing machines. Du Pont Tire Black is retailed in pint cans and is ready for use without thinning. No. 7 Power Polish is sold in one gallon cans only and is intended for car dealers and service stations.

Write for this "PROFIT-PROVER" PLAN

Prove the money-making performance of the Milwaukee "No Nick" Fender Hammer in your own shop. Attach this coupon to your business letterhead for complete information on our "PROFIT-PROVER" Plan. Mail to Milwaukee Electric Tool Corporation, 5330 W. State St., Milwaukee 8, Wis.

TRADE MARK

RESISTOFLEX

flexible

GASOLINE and OIL LINES
WITH COMPART TUBE

RESISTOFLEX CORPORATION
Belleville 9, New Jersey
PLANTS: BELLEVILLE, N. J.
ELKHART, IND. TORONTO, CANADA

• RUGER •

Hydraulic FLOOR CRANES
and Arbor Presses

RUGER EQUIPMENT CO., Inc.
2425 St. Clair Ave. P. O. Box 3821
Cleveland 14, Ohio Portland 8, Ore.

SPINNING POWER

a Companion Product of Full Spark Plugs

GLOBE-UNION INC.
MILWAUKEE 1, WIS.



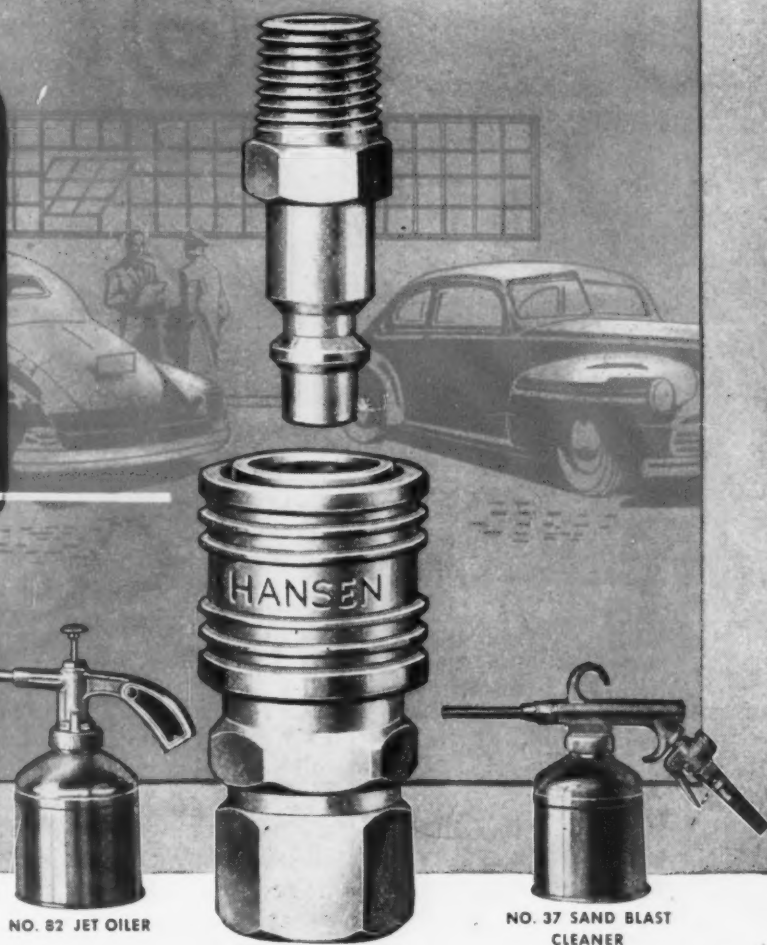
THE COMPLETE LINE that Completely Satisfies

Since 1906 The Fitzgerald Mfg. Co.
Torrington, Connecticut



Fitzgerald
GASKETS

Service
brings 'em
back



NO. 82 JET OILER

AIR HOSE COUPLING

NO. 37 SAND BLAST
CLEANER

HANSEN REPRESENTATIVES

New England States . . . A. D. Geiger,
Belmont, Massachusetts
Southern Ohio, W. Va., Ky.: Steinhagen
Airline Products, Dayton, Ohio
Eastern, Southern States . . .
B-R Engineering Co., Baltimore, Md.
Colorado, New Mexico, Utah, Wyoming:
E. C. Wild Co., Denver, Colorado
Southwest Territory . . . C. C. Brownfield,
Dallas, Texas
Arizona, So. California . . . Burklyn
Company, Los Angeles, California
Idaho, Oregon, Washington . . . Jack J.
Kolberg, Seattle, Washington
Central Western States . . . John Henry
Foster Company, St. Louis, Missouri,
Minneapolis, Minnesota
Northern Cal., Nevada . . . H. E. Linney
Company, Oakland, California
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Detroit, Michigan
Indiana, Wisconsin . . . Neff Engineering
Company, Ft. Wayne, Indiana
Northern Illinois, Eastern Iowa: Walter
Norris Engineering Co., Chicago, Ill.
Northern Ohio: F. & W. Ursem Company,
Cleveland, Ohio

IN CANADA

Province of Ontario . . . John Best
Associates, Toronto, Ontario
Eastern Canada . . . Cowper Company
Ltd., Montreal, Quebec

HANSEN COUPLINGS

built to give better service

There isn't much difference between good service, and just ordinary service . . . but good service brings customers back for more. Hansen Air Service Equipment gives good service because it is built for "peak" performance. Hansen equipment is built better, serves better, and lasts longer.

Hansen Air Hose Couplings separate easily upon slight movement of the socket sleeve. When the plug pops out, air shut-off is instantaneous.

A solid stream of light oil is projected accurately in any direction with the **Hansen Jet Oiler**. Designed for convenience and long service.

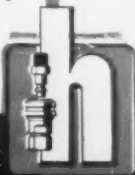
Paint, rust, and carbon are quickly removed by the **Hansen Sand Blast Gun**. Simple to operate. Detachable Air Blow Gun.

Write for Automotive Catalog No. 101

QUICK CONNECTIVE

FLUID LINE COUPLINGS . . .

THE HANSEN



MANUFACTURING COMPANY

4031 WEST 150th STREET

CLEVELAND 11, OHIO

CLUTCH FACINGS • RIVETS
BRAKE SHIM STOCK • RELINING EQUIPMENT
HYDRAULIC BRAKE PARTS

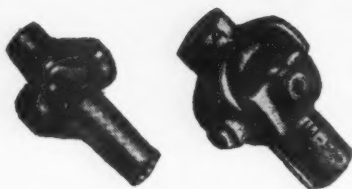
LOOK! YES I SEE

HURRY, CHARLOTTE

JUNIOR! I COULD... YOU! BUT...
THANK HEAVEN, YOU'RE SAFE, THANKS TO
SOUTHERN BRAKE LINING!

SOUTHERN
FRICTION MATERIALS CO.-CHARLOTTE, N.C.

Complete UNIVERSAL JOINTS



Here are the Universal joints that your customers will want to carry. Write today for complete information about the AMKO Line... the leader in the replacement field.

AVAILABLE NOW—For Chevrolet 33-36 Std.; 1934-36 Master; 37-39 and 40-47; for Ford 32-48; for Plymouth 34-47.

Also a complete line of Journal Assemblies. Write for circular.

At all Good Jobbers—Mfd. & Dist. by
AUTOMOTIVE MAN'G CO., INC.
570 W. FULTON ST. CHICAGO 6, ILL.

See your
MANLEY
DISTRIBUTOR
FOR
AUTOMOTIVE
SERVICE
EQUIPMENT

SALES BUILDING FUSE DISPLAY

for Counter
or Wall

See your jobber

or contact
us Direct

LITTELFUSE Incorporated

4757 N. RAVENSWOOD AVE.,
CHICAGO 40, U. S. A.



Swartwood Heads K-F Advertising Department

The appointment of Henry M. Swartwood as director of advertising of Kaiser-Frazer Corp. was announced today by Edgar F. Kaiser, vice president and general manager.

Formerly a consultant on ad-with Kaiser Co., Mr. Swartwood will assume joint responsibility with Hal Babbitt, director of public relations, and Norris Nash, sales promotion manager, for the combined operations of the company's advertising, public relations and sales promotion departments at Willow Run.

In addition to directing and coordinating services provided by Kaiser-Frazer's advertising agency, the combined departments will be in charge of all press contracts, employee announcements, in-plant publications, dealer and distributor publications, literature and aids for sales and service meetings.

Prior to his association with the Kaiser organization, Swartwood was engaged in the radio industry as an advertising and program director on the Pacific Coast.

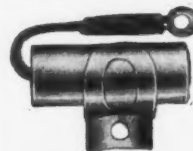
Proved
Dependable

Brown Deer

Hydraulic Service Jacks
Milwaukee 14, Wisconsin



Shurhit Triple Seal Moisture-Proof CONDENSERS



Ask your Shurhit jobber or write us for details on these super-quality replacement parts. Complete Shurhit line includes Condensers, Contact Points, Rotors, Caps, Coils, Brushes, Cut-Outs, Switches, and Spark Plugs.

SHURHIT PRODUCTS, INC.
Waukegan, Ill.

FLARES
FOG LAMPS
REFLECTORS
STOP LIGHTS
MARKER LIGHTS
CLEARANCE LIGHTS
DIRECTIONAL SIGNALS
SEALED BEAM CONVERSION KITS

ARROW SAFETY DEVICE CO.
MOUNT HOLLY, N. J.

Genuine
SERVICE
INDIANAPOLIS
"Measurably Better"
SPRINGS

SERVICE SPRING COMPANY
INDIANAPOLIS 6, INDIANA

FOR ENGINE BEARINGS
CLUTCH PLATES AND PARTS
CHASSIS PARTS

Monmouth
TRADE MARK
is the name

Williams
SUPERBENCHES • SUPERSOCKETS

J. H. Williams & Co., Buffalo 7, N. Y.
"The Wrench People"



GO AHEAD

A E P AUTOMOTIVE EQUIPMENT PLAN WILL HELP YOU

THE BEST EQUIPPED SHOP
GETS THE PROFITABLE BUSINESS

BUY ... AND FINANCE ...
THROUGH YOUR JOBBER

ONE CONTRACT ... ONE COST
... INSURANCE INCLUDED

What's to stop you from getting the local reputation of having the best equipped repair shop in town?

Lack of capital needn't stand in your way, because with the help of the Automotive Equipment Plan, you don't need much capital to get going.

Start as small as you want. Add as you grow. And *grow*, you most certainly will, because the better your equipment the more business will come to you.

Consult your jobber today about the most important items. Get going.



If you don't know about A E P . . . ask your jobber.

COMMERCIAL CREDIT CORPORATION

A Subsidiary of Commercial Credit Company, Baltimore

MORE THAN 300 OFFICES IN PRINCIPAL CITIES OF THE UNITED STATES AND CANADA

FACTORY-ENGINEERED

PONTIAC PARTS

FOR INDEPENDENT REPAIRMEN

GENEROUS DISCOUNTS
QUICK
AVAILABILITY

You don't pay a premium . . . and you get 6 Advantages

1—QUICK AVAILABILITY

Just phone and give your complete order. Your Pontiac dealer will assemble it fast and deliver it to you or have it ready for you to pick up. There's no need for you to maintain an expensive inventory of Pontiac parts.

3—PRECISION FIT

Engineered especially for Pontiac—to fit correctly and save installation time.

4—OWNER SATISFACTION

Most owners prefer to have you use Factory-Engineered Parts on their Pontiacs.

2—GENEROUS DISCOUNTS

Your Pontiac dealer offers you attractive net prices on Pontiac Factory-Engineered Parts. With Pontiac parts you can always make a fair profit for yourself at a fair price to your customer.

5—FINE PERFORMANCE

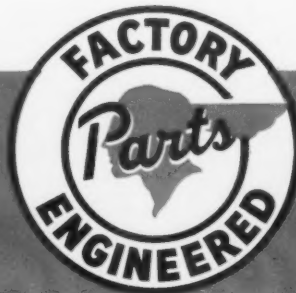
Pontiac-Engineered Parts last long and run well—with new car dependability.

6—FREE TECHNICAL INFORMATION

Pontiac dealers will help you with free technical information on Pontiac jobs;

**THERE'S A PONTIAC DEALER
NEAR YOU TO SERVE YOU**

FAST!



The NEW *Mallory* DISTRIBUTOR-GOVERNOR



A TRUCK GOVERNOR THAT GUARANTEES

Smoother Operation...Less Power Loss
Added Operating Efficiency...Easier Installation

● **REDUCES POWER LOSS:** The Mallory Governor does not choke the engine when pulling a heavy load up hills because the governor throttle remains wide open until the engine reaches its governed speed. Hence, the Mallory Governor reduces power loss.

● **UNEXCELLED SPEED REGULATION:** The new Mallory Governor is operated by a vacuum powered diaphragm which is controlled by a centrifugal air valve on the distributor shaft. This unique arrangement provides instantaneous response, thus making the Mallory Governor free from surging.

● **UNRESTRICTED ACCELERATION:** The Mallory Governor permits the engine to accelerate normally since the governor throttle remains wide open until the engine reaches its governed speed.

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The Mallory Master Coil delivers more energy—insures easier starting, is water proof and age-proof because of a new oil-sealed design that permits an engine to run with entire coil submerged in water.

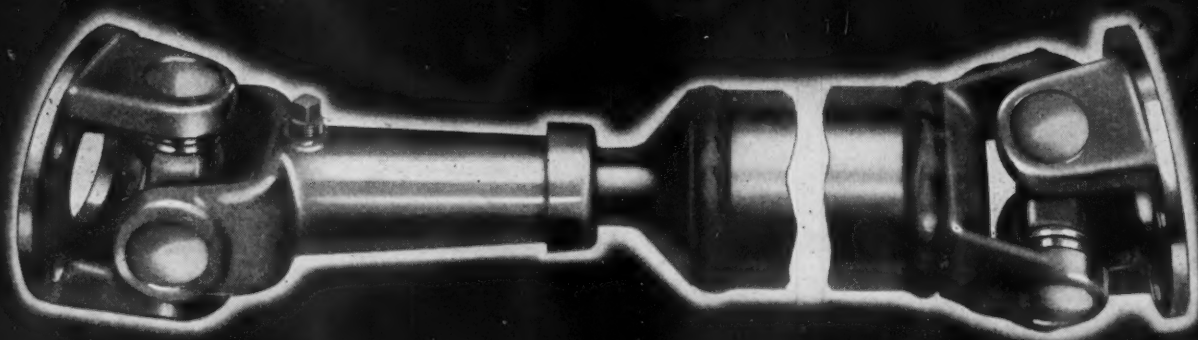
6 Volt Coils—\$10.00 12 Volt Coils—\$12.50
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This MECHANICS Roller Bearing UNIVERSAL JOINT PROPELLER SHAFT assembly *fits right, works right, is made right* and easy to install. Is giving complete satisfaction in thousands of replacement jobs and bringing in many more "recommended"

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Send me your folder and re-order plan on X-Act Match Color Kit for the following 1946-47-48 models: ☐ Plymouth ☐ Dodge ☐ DeSoto ☐ Chrysler

Dealer's Name
Street Address
City Zone State
Attention.....

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Lincoln is the originator of the Kleen-seal Bullneck Grease Fitting—the new, modern fitting with a ball in the top.



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A48-19

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PICTURE QUIZ: Which of these five people gives the right reason for buying U.S. Bonds?

(ANSWER BELOW)



1. Easy to save! "I'm putting my money into U. S. Bonds because it's the *easiest* way for me to save. Under the Payroll Savings Plan, I put aside a regular amount each week for Bonds. So far, I've saved \$500 without missing the money!"



2. Good investment! "Getting back \$4 for every \$3 I invest—the way I will in ten years' time with U. S. Bonds—is my idea of a *good investment*. I know it's safe and sound, too, because it's backed by Uncle Sam. Buy Bonds, I say."



3. Plans for the future! "Ten years from now, the money I'll get for my U.S. Bonds will help to send my kids to college, or buy our family a new home. I think that buying U. S. Bonds is the wisest thing a family man can do."



4. Fights inflation! "I want America to stay economically sound. That's why I'm putting all our extra dollars into U. S. Bonds. It's like buying a share in our country's future prosperity!"



5. Rainyday! "Maybe a rainy day's coming for me. Maybe it isn't. But I am taking no chances. That's why I'm buying all the U. S. Bonds I can through my Payroll Savings Plan."

THE ANSWER

Every one of these people gives the "right" reason—because there's more than one right reason for buying U. S. Bonds.

Whichever way you buy them—through Payroll Savings, or your local bank or post office—U.S. Bonds are the best investment you can make!

Save the easy way..buy your bonds through payroll savings

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MOTOR AGE

The Importance of "Stepping Down"

Here is the story of a new principle
of design that has rocked the industry and
given Hudson unique beauty not possible
in any other type of car.

This time it's
Hudson



THE recessed floor in the new Hudson—now widely known as the "step-down" feature—is the talk of the automobile world. And rightly so! This interesting development is the key to a new kind of motor-car beauty never before obtainable.

People everywhere are attracted by Hudson's low, streamlined silhouette and free-flowing lines.

Only Hudson, because of its exclusive recessed floor that you step down onto, is able to offer streamlined, low-built beauty without asking you to give up interior head room.

Let's take a frank look at the motor-car designer's problem. Since streamlining an automobile reduces available head room for rear-seat passengers, to achieve a low silhouette and maintain adequate head room, both floor and seats *must* be lowered to compensate for the lowered roof. *The recessed floor is a necessity.*

But it is difficult to lower floors and seats, because in all cars, except Hudson, they are built on *top* of a frame. Only Hudson has a new, all steel Monobilt body-and-frame*, part of which is a rugged base structure that permits lowering floors and seats *down* within the frame. The sketches below illustrate this design problem and show how Hudson's recessed floor provides a low, streamlined silhouette, yet preserves head room.



OTHER CARS

NEW HUDSON

The car above, left, cannot be streamlined because the need for head room above the rear seat (built over a frame) makes it impossible to lower the roof. Of course, it is possible to adopt free-flowing lines without recessing the floor, as sketched in the car above, center, but over-all height must be raised, and this destroys the possibility of a low silhouette, which is the mark of the modern motor car.

Here is the long, low gracefully streamlined Hudson—only five feet from ground to top. You can see how the streamlined roof comes down sharply over the rear-seat portion of the car, as compared to the other types of roof lines shown in sketches above. But Hudson floors are recessed down within the frame, seats are lowered, so you get more than ample head room.

The "step-down" principle requires years of engineering work, the development of new production techniques and equipment, and millions of dollars of highly specialized *new* plant investment. Perhaps this explains why Hudson alone offers this vital new design principle today.

Hudson dealers are busy as never before showing this exciting new car to interested thousands who are rapidly becoming aware of The Importance of "Stepping-Down." And the factory is embarked on a long-range advertising and merchandising program to keep that interest at high pitch! Hudson Motor Car Company, Detroit 14.

* Trade-mark and patents pending



Eight body styles in Super and Commodore Custom Series. Your choice, 121 h.p. all-new Super-Six or 128 h.p. Super-Eight engine. Ten body colors. Two special colors or five two-tone combinations—white sidewall tires—at slight extra cost.

Time for SPRING TUNE-UP

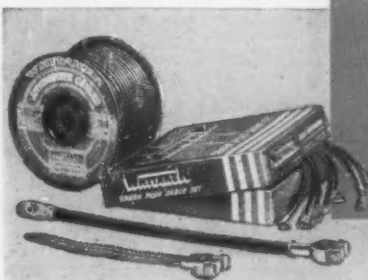


Spring tune-up time means a profitable business for you—if you are stocked and ready to handle the record number of cable and rewiring jobs that are headed your way this year.

See your Whitaker jobber about completely stocking you with the quality line of Whitaker Spooled Cable (including famous "707" Spark Plug Cable) . . . Ignition Cable Sets . . . Battery Cables (featuring exclusive Whitaker FLASH-WELD) . . . and Rewiring Kits.

A kit such as the No. 870 (top illustration) costs very little, yet complete cable sets, to fit any make of car, can be made in less than 5 minutes.

Whitaker Spark Plug Cable Sets (bottom illustration) are complete with cut-to-length spark plug cables, coil cable and all accessories for quick installation. Sold through leading jobbers everywhere.



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Motorists Wise

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MOTOR AGE has a total monthly press run of 67,700. Its total paid circulation is 65,653.

It reaches 24,489 Car and Truck Dealers out of a total of 40,410.

It goes to 36,982 Independent Maintenance Establishments out of a total of 55,694.

It has 3,749 Jobber subscribers out of a total of 7,982. In other words MOTOR AGE reaches approximately two-thirds of the automotive retail establishments, and since its subscription staff is salaried and completely controlled, this circulation is highly selective, quality coverage. It represents preponderantly managers and proprietors of the larger and more important establishments—men with buying power and money to implement it.

—RENEWAL PERCENTAGE 71.15%—

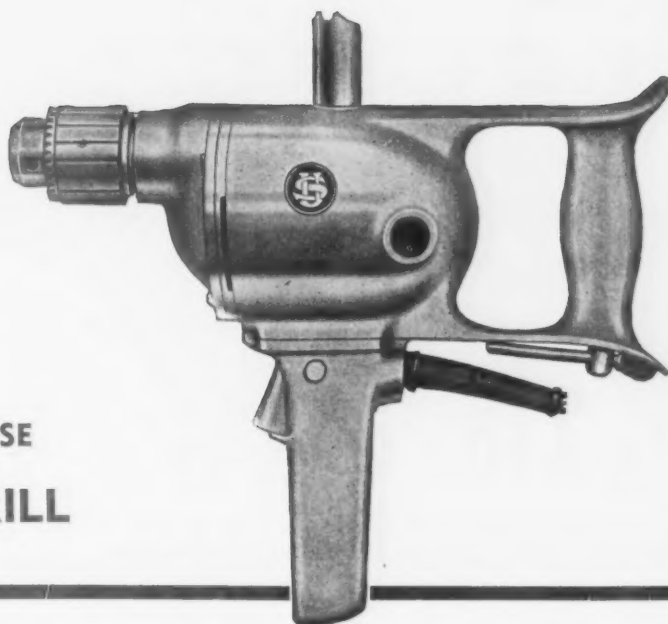
The popularity of MOTOR AGE with its readers may well be measured by its subscription renewal rate, which is 71.15% — the highest for any directly competitive publication.

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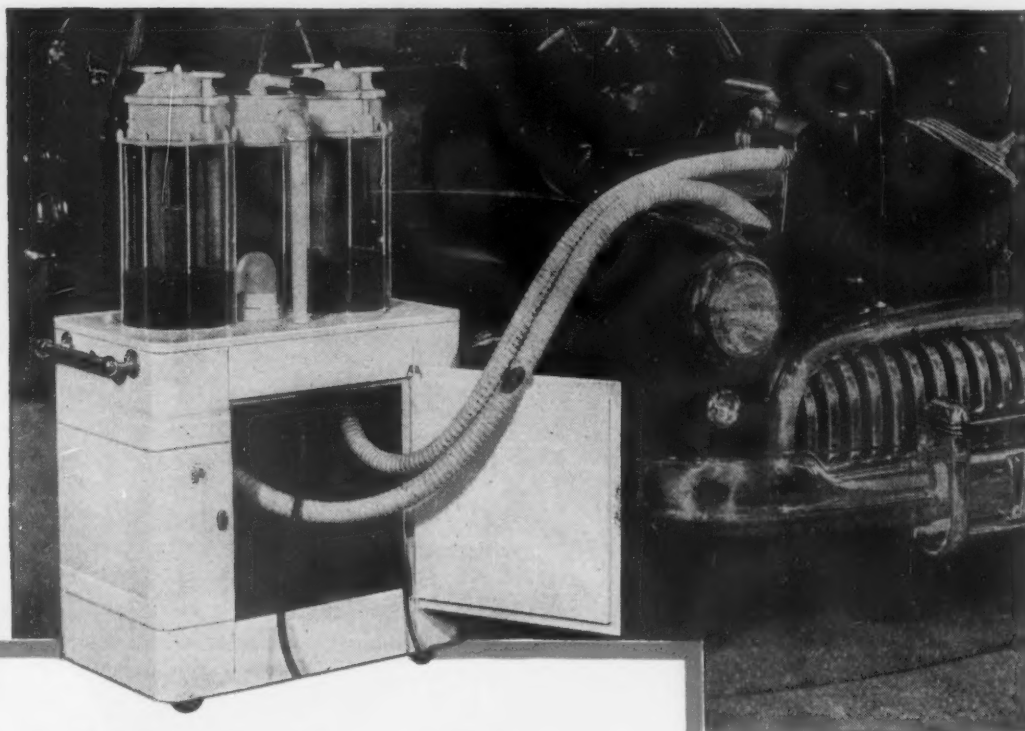
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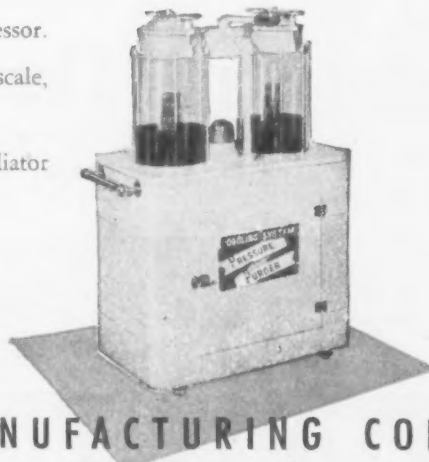
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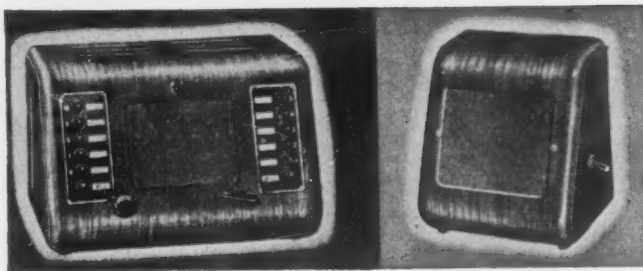


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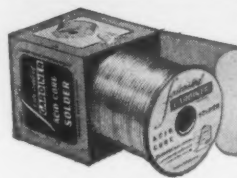
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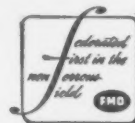
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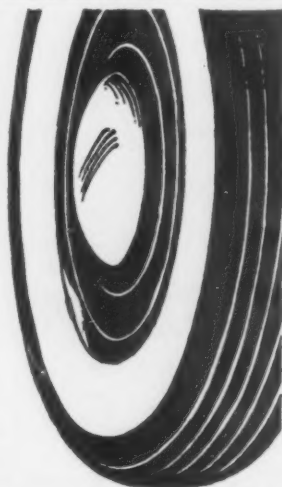
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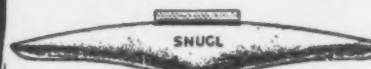
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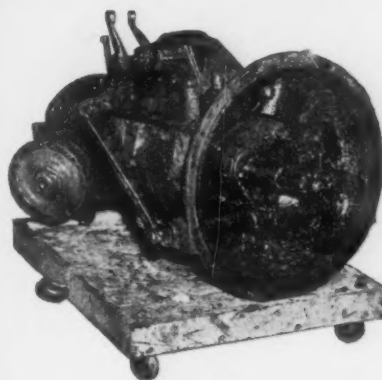
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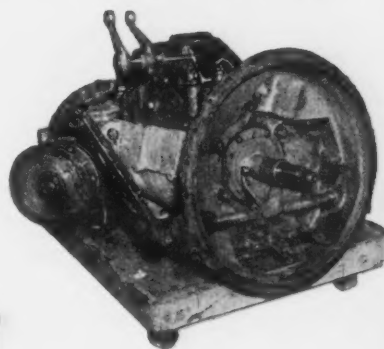
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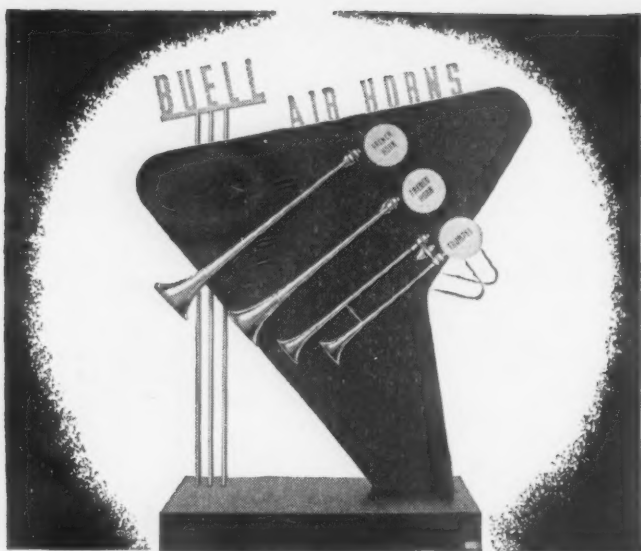
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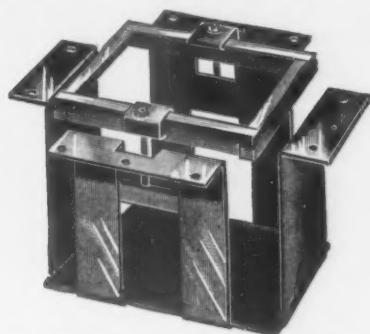
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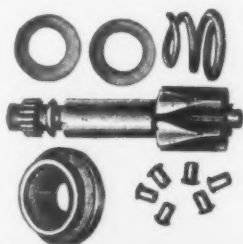
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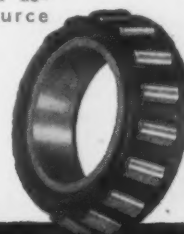
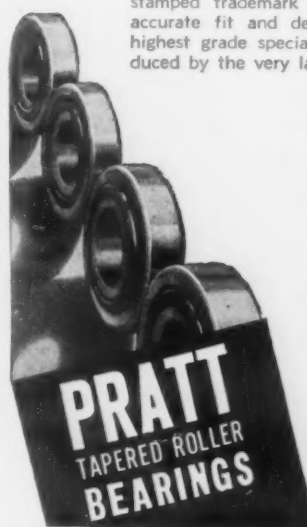
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